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ORIGINAL DEPARTMENT.

LECTURE.

ON THE TREATMENT OF TYPHOID FEVER.*

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(*Continued from page* 480.)

The third method is that which consists in the use of antithermic and antipyretic remedies. There is a clear distinction between these terms, the action of the first being much more limited than the action of the second; practically, however, we may consider them together. In that class, then, we may reckon such antiseptics as salicylic acid and salicylate of soda, which are powerful antithermic remedies. To this class, also, belong cold baths, quinine and alcohol. Quinine is the type of antipyretics, having a marked action on the temperature, the heart, the pulse, the blood-vessels, in short, all the constituent elements of the fever.

What is the *raison d'etre*, or justification of the antipyretic treatment?

While the followers of Hippocrates, Galen and Stahl regarded fever as a curative effort of nature—a means of depuration of vitiated humors—in our own time we have seen Donis and Bouillaud declare fever to be baneful, the source of grave lesions. Bartels, Jurgensen, Liebermeister, Hagenbach, have all demonstrated the pernicious influence of excessive heat on the organism.

We have, in fact, learned to regard the therapeutics of fever as a warfare against a master-symptom which dominates the entire morbid scene, and which alone deserves serious consideration. I allude, of course, to continued, as distinguished from ephemeral fevers.

What are some of the evil effects of fever on the animal economy?

I will briefly mention the principal of them. They are:

1. Wasting of the tissues. This wasting is a veritable consumption, and finds expression in an excessive elimination of urea, over-production of carbonic acid, and disappearance of fat. As for the excretion of urea, it is seventy per cent. greater than in health. The quanity of carbonic acid formed and eliminated, is fully twice the average of health. The consumption of fat is proved by the emaciation of the fever patient.

2. Fatty degeneration of organs. This has been again and again noted in the liver, the kidneys, and the muscles. Experimentation with animals has proved the accuracy of the inferences of the human autopsy. Hares, dogs and other animals have been subjected to gradually increasing high temperatures; degenerations of the muscles, heart, kidney, and liver have resulted.

3. Something more about the effects of prolonged febrile heat on the heart and circulation needs to be said. While fatty degenerations are very frequent, and often cause death, the heart may, without being anatomically injured, suffer such depression that the circulation may become virtually nil. The extremities are cyanosed, stases occur in the lungs and dependent parts, and thromboses form in the vessels.

4. The nervous system does not escape lesions, which may take on the form of inflammatory or degenerative disease; cerebral œdema has been noted.

*Translated by E. P. Hurd, M. D., Newburyport, Mass.

Antithermic Treatment by Cold Baths.

Refrigeration by the outward application of cold has been a favorite method of treating fevers. It has been believed that it is as easy to cool a fever patient as to cool a piece of metal. The physiological fact has been ignored that in the case of the fever patient, the organism is provided with a means of regulation and production of heat. Place an animal or a human being in cold water, and a double action ensues. There is first a contraction of the small superficial vessels, which slows the peripheral circulation, drives the blood towards the centre, and thus diminishes notably the chances of refrigeration of the entire organism. There is first an excitation (of a kind not well understood), of the calorific centre, which causes an increased production of heat, and this not only during the bath, but for some time after. So then, during the bath, nothing great is gained, and after the bath there is augmentation of temperature. No satisfactory refrigeration is obtained unless the patient is kept in the bath some time, say twenty minutes or half an hour.

You may, if you like, cool down the water to 10 or 12 degrees C. (very near the freezing point) as Liebermeister recommends, and you will, without doubt, refrigerate your patient, but animal heat may never return.

The cold bath produces another effect, and an effect which I do not hesitate to call disastrous; it exaggerates the oxidations which take place in the recesses of the tissues, causing more oxygen to be absorbed, and more urea and carbonic acid to be excreted; the tissues, the fat and the albuminates disappear more rapidly in consequence. All physiologists in France and Germany agree on this point.

The excretion of carbonic acid which ordinarily is about 13 grams in half an hour, is increased by a bath of 32 degrees to 15 grams, and when the water is the temperature of 18 degrees, it is 39 grams. The excretion of urea augments in the same proportions. But this is not all. Cold baths, besides their physiological inconveniences, have clinical disadvantages in the way of grave complications which they are likely to determine. Pneumonia (not hypostatic congestion of the lungs, but frank pneumonia), has again and again resulted from the use of the cold bath, according to the method of Brand. Statistics recently published by a physician of Lyons bear me out in this statement (*i. e.*, ten (10) pneumonias out of sixty-three (63) typhoid patients). Another complication no less severe is intestinal hemorrhage. During the period when this method was in use among us, I had experience of such hemorrhage in every fourth or fifth case. It does not stand to reason that the sudden forcing of a great mass of blood from the periphery to the internal organs, as a result of the contraction of the peripheral vessels, can have no disastrous effect on a congested ulcerated intestine!

What effect, moreover, is this intropulsion of blood likely to have on a weakened heart, whose fibres are undergoing degeneration?

The cold bath treatment, then, cannot be defended from either a physiological or clinical standpoint. I do not, however, condemn douches and cold lotions, which in some cases may have a good effect, especially in preventing cerebro-spinal complications.

Treatment of Typhoid Fever by Quinine.

Sulphate of quinine, tried as far back as 1840, by Broqua and Louis, but without much success, then by Rillet and Barthez, then by Pereyra and Boucher a few years later (1846), passed out of use as a febrifuge agent, till, in 1859, Vogt, in Switzerland, applied it to the treatment of fevers in general and of typhoid fever in particular. Shortly after, Liebermeister, following the course marked out by Vogt, instituted in a regular manner the treatment whose rules I shall now lay down, after having indicated the valuable properties of this medicament.

Properties of Sulphate of Quinine.

Quinine is an antithermic remedy. It diminishes oxidations in the blood and in the tissues. It is a precious cardio-vascular medicament. It has also been considered an anti-zymotic. Although Binz has defined the anti-zymotic properties of quinine, allying it to the salicylic series; although it arrests fermentations and putrefactions; although it acts in a special manner on the micro-organisms of marsh-fevers, we are not obliged to take into account its antiseptic power in the treatment of typhoid fever; for the most that we can do in this direction is, possibly, to utilize this singular action of quinine on the amœboid movements of certain cells, and especially the leucocytes. It has been claimed that by "quinimizing" a tissue we may stay the transudation or diapedesis of the leucocytes, and thus favorably modify inflammation. Is there any possible application of this kind to the secondary inflammations so frequent in dothienteritis? This question cannot be answered affirmatively. It would be necessary to give two to three kilograms of quinine to effect this object.

Quinine is also said to act on the whole cerebro-spinal system, diminishing reflex action and aug-

menting tone. Is it for this reason that it has been vaunted in typhoid fever of ataxic form? What is certain is that if the cerebro-spinal disturbances are almost constant under the influence of febrile excess, they ought necessarily to undergo marked abatement from the refrigeration produced by quinine.

Rules for the Administration of Quinine.

(1) *Quality of the Drug.*—The first condition for the obtention of a good result is to have a pure article for experimentation. M. Laborde has recently called attention to the adulterations practised with the quinine of commerce; in one sample he found 43 per cent. of cinchonine. Other sophistications are common. You ought then to be sure that your quinine is pure.

(2) *Dose.*—The dose of quinine for refrigeration in typhoid fever is larger than the dose indicated in fever and ague, the medium dose for an adult being from two grammes to two grammes and a half. [Somewhat more than thirty grains.] If you are not prepared to exceed one gramme (fifteen grains) *per diem*, you had better refrain from the use of the remedy. An "anti-periodic" of half a scruple to a scruple has not the least effect on the typhoid temperature. This is why Broqua and the followers of St. Antoini and Briquet prescribed doses of three, four, and five grammes (forty-five to seventy-five grains) a day, thus dangerously exaggerating the effects of the medicament, and bringing discredit on the treatment.

Mode of Administration.—The quinine may be given in powder, in capsules, in acid solution, which is with difficulty taken, in pills, to be possibly passed in the stools without undergoing solution, or better still, in powder stirred into coffee, which enables it to be well borne by the stomach.

Enemas with quinine, pommades, and hypodermic injections, are not to be thought of in this connection.

Interval Between Doses.—My method consists in giving one dose of a gram (15 grains) early in the morning, and a second dose of a gram about 9 o'clock in the evening. It is perfectly safe to give this quanity of quinine daily to an adult patient. If you make ten doses of the two grams instead of two doses, you will not obtain the antipyretic effect which you desire; the quinine will be rapidly eliminated by the urine before there will be enough in the blood at any one time to produce an effect. Liebermeister advises to give the first gram dose at three o'clock in the afternoon, and the second dose about two hours later.

Physiological Effects.—The quinine commences rapidly to act on the brain; whose disturbances manifest themselves by buzzings in the ears, tremblings of the limbs, troubles of equilibration, weakness, and intoxication. Its febrifuge action is realized after six or eight hours, and attains its maximum after eight to twelve hours. After this period, and often after a free sudation, the fever heat reappears, but without attaining by the second day the height of the previous day. We find generally that we have gained a degree and a half. Only in the most desperate cases is there absence of the thermal fall.

In general, it takes from twenty-five to thirty-six hours for the quinine to be eliminated, when the effect ceases. The elimination by the urine is, however, often intermittent, ceasing at one time to reappear after a few hours. In this respect the elimination of quinine resembles that of arsenic and mercury.

In my method of administration, I anticipated the evening rise of fever by giving the first full dose in the morning, and the evening dose prolongs and intensifies the effect of the morning dose.

It has been said that individuals of strong constitutions require a larger dose than weakly individuals; this is a mistake. Children from three to five years old may take one gram daily; from six to ten years, one and a half grams; from eleven to fifteen years, one and a half grams up to two grams. Such doses have often been prescribed by Barthez.

The treatment, when commenced, ought to be continued, the quinine being given daily, in the same, or in a lessened dose. If you suspend the treatment, you lose what you have gained.

Some refractory cases resist the largest doses that we dare to give. I have seen patients whose fever remained at its customary height after a dose of forty-five grains (three grams). I never have exceeded this dose. These are the grave cases that resist all treatment. The vitality of the organs and tissues is too far gone for them to respond to any medicament. In tetanus and in cholera you often see the same tolerance of the most powerful drugs. You must not abandon such cases, for you do not know beforehand whether there will be reaction or not. There are great fires which water cannot extinguish, but this is no excuse for abandoning water and the pumps.

The Antithermic Action of Quinine.

It produces but slight modifications in a person in health. Liebermeister has seen inconspicuous effects with a dose of two grammes. Small doses produce a very trifling lowering of the tempera-

ture; according to Sidney Ringer, not more than one or two-tenths of a degree. In febrile states, the fall of temperature is marked after full doses, as before stated.

Causes of the Refrigeration of the Quinine.—It can only be explained on the assumption of a retardation and lowering of thermogenesis. If you cut the spinal cord in an animal, there is ordinarily produced an excess of heat, *post mortem*, due to chemical processes which persist after death. If you "quininize" the animal, the temperature does not rise. This effect seems like an inhibition of chemical processes by the quinine. Quinine actually diminishes the oxidations of the economy. Ranke and Kerner have proved that there is diminution of urea from 24 to 30 per cent. The elimination of carbonic acid is also lessened, as proved by Strasburg and Buss.

Quinine as a Cardio-vascular Medicament.—This is undoubtedly the most remarkable of the properties of quinine. Fever determines a diminution, more or less considerable, of the intra-cardiac and vascular tension, which finds expression in the dicrotic pulse. This dicrotism is always proportional to the elevation of body temperature. Sulphate of quinine, in the dose of two grammes a day, brings back toward the normal the cardio-vascular tension, as the sphygmographic and cardio-graphic traces testify. The energy of the contractions of the heart is augmented. All experiments and observations made with animals and with man, sick or well, have given exactly the same results, that is, have set forth in bold relief the marvellous property which quinine possesses of staying the diminution of pressure produced by elevation of temperature, and of augmenting the tension of blood in the heart and vessels. It prevents that relaxation of the blood vessels which forms the point of departure of dicrotism.

With sulphate of quinine we are not compelled to fear, as when cold baths are administered, collapse of the heart, respiratory anguish, and intestinal hemorrhages, and we may continue the treatment eight and even fifteen days with perfect safety.

Alcohol in Typhoid Fever.

Alcohol acts in a similar manner to quinine, and may be given concurrently with the latter through the entire duration of the malady. Far from being a calorifacient agent, as has been pretended, increasing thermogenesis, it becomes a valuable means of restraining waste, for it moderates the organic combustions, and lessens denutrition. Like quinine, it reduces the temperature of the body, as all experiments on men and animals, sick or well, demonstrate. It is then, like quinine, a sub-oxidizing medicament; it diminishes the proportion of carbonic acid exhaled, and of urea excreted; it economizes substances introduced into the organism; it lessens disassimilation. It moreover supports the strength, stimulates the nervous functions, and is, from every point of view, the congener and rival of quinine. It is, however, of most signal use when administered along with quinine, which maintains especially the contractile energy of the heart. The doses of alcohol ought to be considerably larger than those ordinarily given, if one would obtain a refrigerant effect; but as it is impossible to exceed a certain dose without injury, it is well always to aid its action by suitable doses of quinine. This mixed treatment, in my judgment, constitutes the very best means of preservation of the vital forces during this protracted tedious disease.

The following table gives a bird's-eye view of the principal phenomena of the febrile processes, as habitually witnessed; the right-hand table gives the same processes as modified by quinine:

Febrile Phenomena Without Quinine.	*The same Phenomena with Quinine.*
(1) The combustions are exaggerated. CO_2 is increased.	(1) The combustions are diminished. The formation and elimination of CO_2 is lessened.
(2) Urea, which indicates the combustion of the tissues and albuminous matter, is greatly increased.	(2) Urea is lessened 15 to 24 per cent.
(3) The pulse is accelerated.	(3) The pulse is slowed.
(4) It is dicrotic.	(4) The dicrotism almost always disappears.
(5) The temperature is from 38 to 41° C.	(5) The temperature falls a degree and a half.
(6) The heart becomes gradually enfeebled.	(6) The heart acquires more contractile force.

COMMUNICATIONS.

VIEWS OF MORTALITY STATISTICS, WITH SPECIAL REFERENCE TO THE U. S. CENSUS RETURNS OF 1880.

BY THOS. S. SOZINSKEY, M. D., PH. D.,
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In the January issue of *The American Journal of the Medical Sciences* there is a very instructive article on the registration of vital statistics, by Dr. John S. Billings, of the United States Army, to whom, I need hardly say, the profession is under considerable obligations for much useful work. In

it the importance of accuracy and completeness in such statistics is insisted on, and the means by which these desirable features of them may be at least approximately attained, are treated of interestingly and fully. A few words of advice, I may say, are also given to presumptuous critics, a class who, he would seem to think with Bacon, not infrequently assume that "that which they understand not is false set down." On the points treated of by the learned doctor it is not my purpose on this occasion to dwell; my purpose is to treat of the interpretation, so to speak, of mortality statistics—a still more difficult subject, and one that is but poorly understood by many. I do not intend to take up all the phases of this important theme. To discuss the matter in its entirety and at length would require much space. I have elsewhere* treated of it somewhat comprehensively.

Notwithstanding what Dr. Billings says about critics—a class, after all, whose better members, at least, do something in the interest of truth and progress—my remarks will be in the main critical. In fact, it is hardly possible to discuss the subject satisfactorily, or at least interestingly, in any other way, there being much risk of becoming wearisome and unpleasantly didactic. I will dwell principally on errors which should be avoided in handling statistics. And I will not take a newspaper article, or any other every-day production, as the basis of what I shall say—it would not be worth while to do so; I will go where one should expect soundness; I will take Dr. Billings' introduction to the abstract of the mortality statistics of the United States for the census year ending June 1, 1880, given in "The Compendium of the Census," which has just been issued.

According to the census returns for the year ending June 1, 1860, the death-rate was 12.5 per 1,000 of the population; in the year ending June 1, 1870, it was 12:8 per 1,000; and in the year ending June 1, 1880, it was 15.1 per 1,000. Referring to these figures for the year 1880, Dr. Billings says, "This does not indicate any actual increase in the number of deaths as compared with the living population." If the doctor had been duly on guard against indulging in unsound logic, he would have introduced the saving word *necessarily* before *indicate*. Indeed it may be set down as an important truth that one who has little love for qualifying words and phrases had better avoid speaking or writing about any of the philosophical aspects of vital statistics. As Dr. Parkes says, "properly grouping complex facts so as to analyze them and to bring out all the possible inferences, can only be done by the most subtle and *logical* minds." However, Dr. Billings continues: "It shows rather that the efforts made in the census of 1880, to obtain more complete returns of deaths than had been collected in previous enumerations, have been to some extent successful." On the doctor's account and for other reasons, I would gladly take this statement to be true; but unfortunately I can find only a very little more ground than the doctor gives for believing it, which is none at all. He needs to be reminded that coincidence is one thing, and cause and effect another. The *non causa pro causa* or *post hoc ergo propter hoc* fallacy is far too common—especially in the writings of doctors, disgustingly common. My patient took such and such a medicine among others, perhaps with them, and got well; therefore it cured him. Very likely nature did it, and possibly in spite of that particular medicine.

I am aware, however, that some special pains were taken to make the returns of deaths reasonably complete in the census of 1880, but I have excellent reasons for believing that they were largely in vain. There is one obvious reason why the statistics for 1880 should be fuller than in other census years, all other things being equal; namely, because the local returns for the States of Massachusetts and New Jersey and the District of Columbia and twenty-two cities, were taken in place of a canvass by the census enumerators, returns which, being based on "a regular system of registration and on burial permits, are therefore probably very nearly accurate." In the State of Massachusetts, excepting Boston, the enumerators' returns were deficient 26.42 per cent. of the number returned by them; and in New Jersey they were deficient 34.45 per cent. Culling off a third in these States and cities would reduce the rate for the whole country considerably. This much may fairly be said, that while pot-house politicians compose the body of the enumerators there will be little room to hope that the returns will be very satisfactory.

As hinted already, I believe that Dr. Billings is in error, at least largely, in referring the increased death-rate in 1880 to greater completeness in the returns. I think that the increase can be shown to be, to a great extent, at least, the result of a heavier mortality in 1880 than in 1870, or 1860.

Now, if Dr. Billings had taken a critical glance at the causes of the deaths in 1880 he would

* "Aspects of Mortality Statistics," *Penn Monthly*, April, 1881.

likely have hesitated before making the assertions given above. Looking at death or any other vital statistics in their entirety is not apt to give right impressions. The doctor practically assumes that the deaths were in all respects essentially the same in proportion to the population in the census years 1860, 1870 and 1880. There is no sound reason for doing this; no reason at all in fact; whereas there are reasons sufficient and to spare for holding a reverse opinion. No disease is constantly alike in its fatality from year to year. Some, however, are comparatively so, while others are markedly otherwise. The various zymotic diseases are of the latter class. An epidemic disease may be infinitely more destructive one year than another. Weather differences are in themselves ample to cause very decided differences in the extent and character of the mortality from year to year—these being, as every one knows, great enough with us.

The deaths from many individual diseases and different classes of diseases were very far from similar in the census years 1870 and 1880. I have prepared the following table, which will show this very clearly:

DISEASES.	1870. PROP. OF DEATHS: *To the Whole.*	1870. PROP. OF DEATHS: *To the Pop...*	1880. PROP. OF DEATHS *To the Whole.*	1880. PROP. OF DEATHS *To the Pop...*
Measles	1 to 53	1 to 4,189	1 to 86	1 to 5,717
Scarlet Fever	1 to 24	1 to 1,904	1 to 46	1 to 3,055
Enteric Fever	1 to 22	1 to 1,744	1 to 33	1 to 2,189
Diphtheria	1 to 75	1 to 6,139	1 to 20	1 to 1,306
Whooping-Cough	1 to 54	1 to 4,296	1 to 67	1 to 4,477
Malarial Fevers	1 to 42	1 to 3,312	1 to 37	1 to 2,475
Consumption	1 to 7	1 to 552	1 to 8	1 to 546
Respiratory Diseases	1 to 7.6	1 to 605	1 to 7	1 to 565
Nervous Diseases	1 to 8	1 to 640	1 to 9	1 to 599
Digestive Diseases	1 to 6.6	1 to 523	1 to 7.6	1 to 503
Diarrhœal Diseases	1 to 11	1 to 914	1 to 11	1 to 765

As the reader will observe, there was an increase in the death-rate in 1880 from diphtheria and malarial, diarrhœal, respiratory and nervous diseases and more or less of a decrease from measles, scarlet fever, whooping-cough, and enteric fever. The increase from diphtheria was shockingly great: in 1880 there were 38,398 deaths reported, while in 1870 there were only 6,303. If the deaths from this disease had been as few in 1880 as in 1870, the whole death-rate in the former would have been 14.4 instead of 15.1. Another contagious disease which tended to increase the mortality in 1880 was yellow fever. The deaths reported from this disease in 1870 were only 177, while in 1880 there were probably 1000 or more*. There were 587 in Memphis alone. The increase in deaths from malarial fevers was large. Likely it was real. The table of temperatures given below would prepare one for many cases of these diseases. A cool September and a warm October and mild winter as a whole, with great ranges of temperature, will almost inevitably produce many cases. In the census year ending June 1, 1880, there were forty deaths from malarial fevers, which was a fifth more than in preceding years, in Philadelphia.

Of the diseases which are nearly alike destructive from year to year, consumption is a notable one. Thus, in Philadelphia for the three years ending with 1881, the deaths from this disease were respectively 2,471, 2,692, and 2,768. The increase here is about proportionate with the increase in the population. In that city the deaths from the disease were 1 to 308 of the population in 1870, and 1 to 325 in 1880. Now, if the returns of the deaths from consumption should be in nearly similar proportion to the population from year to year, of course, the returns of it should give a fair idea of the completeness of the returns as a whole. This test would not give much support to Dr. Billings in his assertion that the returns for the census year 1880 are more complete than those for that of 1870. As seen above, there was 1 death to every 552 of the population in 1870, while in 1880 there was 1 to every 546.

The fact that the proportion of deaths reported from consumption in 1880 was 1 to 8, while in 1870 it was 1 to 7, would apparently indicate that the returns of deaths from other diseases were fuller in the former than in the latter year, the proportion of deaths from it to the population being taken as alike each year. What has been said above, however, regarding the greater mortality in 1880, from diphtheria and other diseases, greatly lessens the probability of the truth of this.

Probably, as Dr. Billings says, the deficiency in returns of deaths "is greatest in the case of infants, of females and of foreigners, and increases in a tolerably uniform ratio for each month, going backward in time from the date of taking the census. It is also greatest in the more thinly settled sections of the country." Taking the greatest deficiency to be in the case of young children, it of course follows, other things being equal, that the more complete the returns the greater is the proportion of such children. Now,

*The returns given in the *Compendium* do not indicate the number.

in 1870 the proportion of deaths of persons under one year to the whole was 1 to 4·4; and in 1880 it was 1 to 4·3. The proportion of deaths of persons under five years in 1870 was 1 to 2·4, and in 1880 it was 1 to 2·5. There is but little in these figures to support Dr. Billings. The slight increase in the proportion of deaths of infants in 1880 may not be entirely, or at all, due to greater completeness in the returns. The increased deaths from diphtheria, diarrhœal diseases, etc., would, perhaps, entirely account for it.

As stated above, weather differences are in themselves ample to cause decided differences in the extent and character of the mortality from year to year. Now, it is not possible to furnish, in a limited space, definite information about the weather throughout the United States for any particular year, the extent of territory being so great. And indeed it is difficult to get definite meteorological information for any year previous to 1872, the U. S. Signal Service Bureau not being fully in operation till then. The following table, compiled from the observations so long and admirably made at the Pennsylvania Hospital, indicates in degrees Fahrenheit the state of temperature at Philadelphia, for the census year ending June 1, 1870 and the one ending June 1, 1880:

MONTH.	1869–70.		1879–80.	
	MEAN.	RANGE.	MEAN.	RANGE.
June	73.62	38.0	73.18	48.0
July	76.54	35.5	77.32	40.0
August	76.30	37.5	74.53	40.0
September	67.33	40.0	64.70	46.0
October	52.50	44.5	62.09	56.0
November	41.27	32.0	42.96	54.0
December	37.31	42.5	37.81	50.5
January	41.07	51.5	39.12	39.0
Februaary	34.73	48.0	39.03	55.5
March	37.87	38.0	39.64	56.5
April	53.50	49.0	53.10	55.5
May	65.26	34.5	70.59	64.5

These figures will give some idea of the temperature in a large section of the United States in the two census years. It is not to be presumed that they will give a very definite idea. However, it will be seen by them that July was warmer and October, February, March and May greatly warmer, in the census year ending June 1, 1880, than the corresponding months of the census year ending June 1, 1870; but what is more remarkable is the greater range of temperature every month, except January, during the former than the latter year. The figures of ranges in the former year are very extraordinary. It may be said that the winter of 1879–80 was altogether mild, but with great ranges of temperature. In a volume before me (the Ninth Annual Report of the State Board of Health of Michigan) an intelligent meteorologist (Dr. Baker) says: "The winter (1879–80) which is now far spent seems destined to take a memorable place in the annals of meteorology. Although its extraordinary thermometric ranges have yet to be fully made up, it bids fair to exhibit the most marked record of sunshine and warmth east of the Mississippi and south of the forty-fifth parallel." Now, generally speaking, it is the extent of range of temperature which tells on health. The records show a very heavy mortality in Philadelphia in July, September and October, 1879, and in January, April and May, 1880. In August, 1879, the mortality was somewhat less than in August, 1869, and the same was the case in December and in February, 1880. From all the data at hand I should say that the census year ending June 1, 1880, was much less healthful than that ending June 1, 1870.

There are reasons besides the state of the weather why an increased mortality might have been expected in 1880 over what it was in 1870. Among them are these two, namely, the fact that the deaths of great numbers of young men in the civil war lessened greatly the number who, in 1870, would otherwise have been parents and passing beyond middle life; and the other, that the great multitudes of immigrants who landed on our shores from the close of the civil war forward had largely become parents, and were fast passing beyond vigorous adult life in 1880.

(To be continued).

THE ARSENITE OF BROMINE AND ITS USE IN THE TREATMENT OF DIABETES MELLITUS.

BY R. H. GILLIFORD, M. D.,

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Read before a meeting of the Allegheny County Medical Society at Pittsburgh, Pa., May 15, 1883.

In the early part of December, 1882, I began some experiments with bromine and arsenious acid, the results of which have in part been corroborated by experiments performed at my request by a practical chemist. As I can find no account in any works on chemistry of a compound or salt formed by the union of bromine and arsenious acid, I submit my results or views with diffidence, and will welcome either correction or confirmation. I find that bromine and arsenious acid will unite under certain favoring conditions, in the proportions of two hundred and forty parts by weight of bromine to ninety-nine parts by weight of arsenious acid. When they are perfectly

united, or the arsenious acid completely dissolved by the bromine, they form an oily liquid, soluble in water and alcohol without any apparent reaction. They unite very slowly, and sometimes seem for many days as if no union was taking place, when merely agitated in contact with each other. When united without the addition of water, they form a salt which consists of three equivalents of bromine and one equivalent of arsenious acid, and would be represented by AsO_3, 3 Br.

When water is added before the bromine is united completely with the arsenious acid, or when bromine and arsenious acid are brought together in the presence of water, there takes place an immediate and rapid reaction, with the evolution of considerable heat. Evidently the water is decomposed, and hydrobromic and arsenic acids are formed, and the result is a solution of the two acids with a little free bromine in the excess of water.

The solution used in the appended cases was made by the complete union of the arsenious acid and bromine before the addition of water, and from observation I believe it to be much less irritating to the stomach than a solution of the hydrobromic and arsenic acids.

As I have seen no account of any compound of bromine and arsenious acid in any medical works or journals, I have concluded that I have been the first, in this country at least, to make and prescribe arsenite of bromine.

Dr. Theodore Clemens, of Frankfort, Germany, has been using some compound of bromine and arsenic in the treatment of diabetes, and has reported great benefit from its use.

The medical journals have called his remedy bromide of arsenic, but from the known properties of bromide of arsenic, it seems much more probable that the article he uses is either arsenite of bromine, or a solution of the hydrobromic and arsenic acids.

I have made a solution of arsenite of bromine and used it in a number of cases, and furnished it to several physicians, who have prescribed it and reported to me its effects in the treatment of diabetes mellitus.

While the notes of some cases are incomplete in many important points, yet its use has been followed by the most marked benefit in every case of diabetes in which it has been prescribed so far.

Some of the cases seem to have made a complete recovery, others seem to be progressing steadily towards a complete recovery. Dr. C. Emmerling, of Penn avenue, Pittsburgh, has treated two cases of diabetes mellitus with my solution.

The first case, a male, aged 30 years, was benefited so much that in two weeks' treatment he had got rid of all the distressing symptoms of the disease; the specific gravity of the urine falling from 1036 to 1029, and the quantity of urine being decreased to less than one-half that passed at the beginning of the use of the remedy.

The patient being of dissipated habits, disappeared from the dotcor's observation.

Dr. Emmerling's other patient met with the same marked and immediate improvement following the use of the remedy. His age was 47 years, a saloon-keeper by occupation, and a very large man, and a very heavy eater and drinker; the quantity of urine passed was enormous. Dr. Emmerling reports that he seems to be getting well. The specific gravity of the urine has been reduced from 1036 to 1028, and the quantity of urine passed has been reduced to four and one half pints in twenty-four hours after one month's treatment.

Dr. A. D. Johnston, of Sedgwick street, Allegheny, furnishes the following notes of a case treated by him: Weston Hall, aged 19 years, laborer in steel works; called March 19, 1883, for treatment, and stated as follows: About January 1, 1883, he was carrying one end of a steel axle, and the man at the other end allowed his end to fall: the jar or shock was so severe as to unfit him for work for several days. Shortly after the accident he noticed an increase in the flow of his urine. The flow increased until March 20; he was passing three gallons of urine in twenty-four hours, of acid reaction and specific gravity of 1035.

His thirst was constant. He cannot eat enough to satisfy the cravings of hunger, and is very much emaciated and very weak. Tests for grape-sugar in the urine show not less than twenty-five grains of sugar to the fluid ounce, estimated by the fermentation test.

March 22d. A solution of arsenite of bromine was procured from Dr. Gilliford, and two drops ordered to be taken four times daily.

March 25th. Improvement marked as regards the quantity of urine passed; thirst not nearly so excessive; feels better after eating; feels stronger; spasms of the calves of the legs disappearing; specific gravity of the urine 1030; can lie until nearly morning, whereas formerly he was compelled to rise at least three times during the night to void urine. Dose increased to four drops four times a day.

March 29th. The patient is able to lie all night

without rising to urinate. The improvement in strength and general health very marked.

April 17th. The patient thinks himself well. His gain in flesh is very noticeable. Urine passed in twenty-four hours, eighty fluid ounces, specific gravity 1020, acid reaction. Fehling's test shows no sugar in the urine. The patient leaves for Clarion county in a few days to go to work, promising to write weekly and keep a record of the amount of urine passed.

Dr. J. B. Johnston, of No. 25 Pennsylvania avenue, Allegheny, furnishes the following notes:

On the 16th day of April, 1883, I was called to see a boy aged sixteen years and five months. I found him very much emaciated, but complaining of nothing in particular, only that his thirst was insatiable, and he was *ravenously* hungry, as he said. He said his fauces and throat were very dry and parched. I examined his *tongue* and found it red and fissured. From the symptoms, I concluded he had diabetes; he was passing from a gallon to a gallon and one half in twenty-four hours of limpid urine. I immediately made the tests for saccharine urine, and found it to contain sugar in a very decided quantity, *Moore's*, *Tromer's*, and the *yeast* test all verifying each other. I put him on the usual treatment of cutting off the supplies, and fed him mostly upon meats, animal broths, vegetable soups, fresh fish, etc., including cabbage and turnips. The sp. gr. when I first saw him was 1038. I found it to vary in density from 1035 to 1040. I tried the different modes of treatment usually resorted to, but must say I found little or no improvement in the case. I found the best results in the first part of the treatment from tinct. ferri. mur., given in fifteen-drop doses half an hour after meals, in a wine-glassful of water. During the time he was taking the *iron*, the thirst was not so distressing nor was the appetite so voracious, but the urine was nearly if not quite as copious, and the specific gravity remained high.

During the time the iron was being given, there was passed on

April 27, 132 fluid ounces of urine.
" 28, 130 " " "
" 29, 129 " " "
" 30, 127 " " "
May 1, 131 " " "
" 2, 129 " " "
" 3, 126 " " "

During this time the sp. gr. varied a little, from 1036 to 1038. On the 4th day of May I began giving four drops of solution of *arsenite* of *bromine* (my attention having been called to *it* by Dr. R. H. Gilliford), largely diluted with water, half an hour after each meal. On the 5th the quantity of urine to my surprise had fallen to 110½ fl. oz.—on the 6th to 100 fl. oz. with sp. gr. of 1034.

On the 7th I again examined the density of the urine, and found it 1032, with a still decreased quantity, 98 fl. oz.

May 8th I did not take the sp. gr. but found 94 ounces of urine. Patient is sleeping well at night, and says he does not need to get up so often to urinate.

May 9th. Specific gravity 1032, and 94 ounces of urine. Same as on 8th, but he confessed to indiscretions in his diet.

10th. Specific gravity 1031, with 92 ounces of urine. Thinking the dose of the arsenite might be safely increased, I began on the 9th to give five drops instead of four.

11th. Specific gravity 1030, with 89 oz.

12th. Specific gravity 1030, with 87 oz.

13th. I did not take sp. gr. nor quantity.

14th. Examined both quantity and quality of urine. Specific gravity has fallen to 1029, and the quantity is 85 oz.

The symptoms of the patient are not by any means so urgent as in the beginning of the treatment. Thirst diminished, appetite less craving, diminished quantity of urine from 132 oz. to 85 oz., sp. gr. diminished from 1038 to 1029. There is one thing to be observed, that there has been a constant decrease in the quantity and sp. gr. of the urine, though it has not been regular; but when we see that the remedy has been in use only since the 4th day of May (10 days), we cannot but look upon the case with much hope. What the subsequent condition of the patient may be, cannot yet be known; but from the progress he has made, and his present condition, I look upon his case as very flattering.

Hospital Reports.

WEST PENN HOSPITAL, PITTSBURGH, PA.

SERVICE OF F. LEMOYNE, M. D.

Reported by W. L. Mills, M. D., Resident Surgeon.

Compound Fracture of Skull Followed by Abscess at Base of Brain.

Michael Corley, æt 9, of Mansfield, Pa., was admitted to hospital Saturday, Nov. 18, 1882, 9 p. m., having jumped from a coal car when in motion, and fractured his skull, five hours previous to admission. When admitted the boy was entirely conscious, and showed no evidences of compression. Patient had three scalp wounds, in two

of which were fractures; one merely a fracture in posterior upper part of left parietal bone, no depression; the other, the important one, was in right frontal region, wound extending from a point near median line, a little behind coronal suture forwards towards the outer canthus of right eye, about two inches in length. The scalp was entirely cut through, brain membranes ruptured, and brain substance oozing from wound. Anterior to scalp wound there was a marked depression. By use of probe, a large piece of frontal bone was found to be depressed, and so loose as to be easily removed by forceps, after wound was enlarged forwards. The removal was attended with considerable bleeding, and depressed fragment being so near the median line, fear was entertained lest the longitudinal sinus had been wounded. But after the removal, bleeding, which was venous, soon stopped. The wound was drawn together gently, but no straps or sutures used, only dry absorbent cotton applied so as to make slight compression. The fragment was from frontal bone, of an oval shape, an inch in length and nearly as wide, and both tables entire. The other scalp wounds were dressed with oakum and carbolized oil, and given free drainage.

The patient reacted well, and was soon put to bed and slept well all night. He asked continually for water, from time he came into hospital. All the following day the patient was quiet, but vomited whenever given water or milk. Nothing but beef-tea was retained, and only then when given in small quantities.

The following is a tabulated statement of pulse and temperature:

	Morning.							
Nov. 19.	Pulse	120.	Temp.	101° F.	Pulse	130.	Temp.	103⅘° F.
" 20.	"	108.	"	103° F.	"	114.	"	102⅘° F.
" 21.	"	108.	"	103° F.	"	120.	"	104⅖° F.
" 22.	"	108.	"	102½°F.	"	120.	"	103¾° F.
" 23.	"	104.	"	101⅗°F.	"	120.	"	103 7/10° F.
" 24.	"	108.	"	103⅛°F.	"	120.	"	104⅗° F.

Treatment.—On the night of admission,

℞.—Calomel, grs. vi.
Bicarb sodæ, ʒij.

was given. Also,

℞.—Tr. veratri viridis, gtt.ij.
Liq. amm. acetatis, fʒss.

every three hours, as pulse was 120.

Nov. 19. Gave calomel grs. x. in powder. Nov. 20. Had a good passage, vomited at intervals during day, but had a very good night. Slight discharge from compound fracture. Some decomposing brain substance was taken away, and part of wound drawn together. Breath very fetid. Asked continually for water. Was very restless, and bed-clothes tied down. Slept at intervals. When awake, perfectly rational. No difference in size of pupils.

Nov. 21–24. Condition about the same. Bowels moved naturally once or twice daily, stools dark-greenish. Headache was so little complained of that it was overlooked as a prominent symptom.

The only medicine given besides purgatives, (calomel in small doses) was veratrum viride to bring down pulse, and when it was found it did not tend to rise above 108 or a 120, the veratrum was stopped, Nov. 19th. Patient made a great outcry whenever head was dressed, but at other times would roll about in bed, or jump out on floor, and evince no pain, so that little attention was paid to his cries.

Nov. 24th. Was particularly irritable and hard to dress head. Brain substance still protruding, but not so far as the day before. Talked wildly, always begging for water, and when in pain, always in Irish. Was somewhat flushed in face.

General condition so much the same that no particular attention was given the exaggeration of some former symptoms. Until 24th hope was entertained of recovery. Patient was drowsy and slept most of the day, waking at intervals and starting up wildly and asked for whiskey. Still no signs of compression or serious brain trouble, as he only showed signs of pain when head was dressed and this was attributed to irritability, as he at other times voluntarily jumped out of bed without evincing pain. No vomiting since 23d inst., and that only brought on by drinking water. Took and retained beef tea and milk.

Nov. 24, 8 P. M. Patient tore off bandage, and wound was much irritated by scratching or rubbing on pillow. Bandage reapplied, amid a storm of passion and Irish brogue, and hands were tied to prevent removal of bandage. He soon became quiet and slept.

10 P. M. Was sound asleep.

At 2 A. M. Nov. 25th. Night nurse noticed labored breathing, and before resident was waked and could get to ward, the boy was dead.

Autopsy made 14 *hours after death.*—The calvarium was removed, brain membranes cut through, and brain removed. The base of brain, particularly the pons, had an opaque appearance, was somewhat yellow and granular. The upper surface of brain showed no marked changes, except the meningeal veins were much congested. On raising up the cerebellum, an abscess was found lying in the fissure between the lobes of cerebellum, about the size of a chestnut, extending down to the fourth ventricle. The abscess was beneath the arachnoid membrane, and contained considerable yellowish pus. The lateral ventricles were filled with a purulent fluid and choroid plexuses somewhat congested. The wound in brain substance was sloughing, and extended some distance into tissue. There was a part as large as a walnut softened, but it in no way connected with abscess on lower surface. On raising the calvarium a marked depression was found in frontal bone, larger than, and lying towards, the median line, from hole left by removal of depressed fragment. The second fracture showed much larger on inner than outer surface, but no depression at all. The sudden death, with no premonitory symptoms of death, can be explained, I think, by abscess pressing on the upper part of fourth ventricle, which, as it enlarged, encroached on and pressed on the spot in floor of fourth ventricle, known as the respiratory centre, and suddenly stopped respiration. But why an abscess in under-surface, is another question? There was no fracture of base of skull discoverable on careful examination. A day or two before death, something peculiar was noticed about the boy's respiration, which was of a sighing character and very slow, but no more attention was paid to it, as at other times it was rather faster than normal. Headache was little complained of, and only did he

make resistance when raised up, which seemed to give him pain.

There was no time to examine lungs before body was removed, but as the central cause of death was found, the post mortem was entirely satisfactory to the resident physicians.

CITY HOSPITAL, PRAGUE.

Some Preparations of Gelatin in Diseases of the Skin.

BY PROF. F. O. PICK.

Professor of Dermatology and Syphilis in the University of Prague.

[Reported by LOUIS SCHWARZ, M. D.

GENTLEMEN: A year ago I called your attention to a preparation called Chrysarobin gelatinon (Goa powder with gelatin), and recommended its use in psoriasis to you. The method of applying it is already known to you; the chrysarobin is prescribed in the quantity necessary, and is applied to the parts when in a fluid state by a brush. Jarisch, in referring to this mode of application and medicament, said the problem is solved and the beneficial effects of chrysarobin in psoriasis is established, and all evil effects are done away with. There are several points to be observed. The first is to obtain a method by which we can apply a medicament to a large surface at once, when necessary, for in many cases it is necessary. Formerly in such cases we were obliged to apply an ointment or plaster to one part alone. This required time and skill, for when an ointment was applied to one part, before the other part was finished the former was rubbed off; it was also necessary to bandage the entire body of the patient. This required time and skill, and annoyed the patient, and ointments always soil the underclothes, etc. By using the gelatin preparations, all these inconveniences are avoided. Following this plan of treatment, I have used other gelatin preparations with advantage—pyrogallol (pyrogallic acid), naphthol (the active principle obtained from tar), iodoform, salicylic, and carbolic acids. I will now demonstrate practically to you a case in which I used pyrogallol for psoriasis.

A. H., age 42, male, strong build, was admitted to my clinic two months ago with his entire body covered with psoriasis, so that only small parts of the skin were free from the disease. Having used pyrogallol in many other cases, and having good results from it, I applied a ten per cent. mixture of pyrogallol and gelatin to this patient's body. The mode of applying is the same as with other preparations. The patient, after having been bathed in water, a heated solution of the pyrogallol gelatin is applied to the parts with a small brush. As soon as it becomes dry, a small quantity of glycerine is applied to the surface to prevent the coating from cracking or peeling off. This coating being transparent, allows you to see the progress of the treatment without removing it. This is easily seen in this case: in some places the skin is perfectly normal. The dressing was applied in the beginning thrice weekly, and later twice weekly, with good results. These preparations can be applied by patients on themselves, and do not necessitate their being confined to a hospital or their home. It is a clean preparation, can be easily removed, does not soil the clothes, nor prevent motion when applied over a joint; it is not expensive, does not crack or peel off. It is prepared in the following manner: dissolve 12½ ʒ of dry white gelatin in 25 ʒ of distilled water by a water bath, and while stirring add Goa powder, pyrogallic acid, naphthol, iodoform, carbolic or salicylic acids, in whatever quantity necessary, allow it to cool, and the cake will take the form of the capsule in which it was prepared (a porcelain capsule is preferred). You can then direct the patient to take the necessary quantity, place it in a china saucer, apply heat to it, and when in a fluid state apply to the parts with a brush. I am positive that any one resorting to this mode of treatment will never resort to the old manner of treating diseases of the skin by ointments, etc.

MEDICAL SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday evening, April 12.

Dr. M. O'Hara in the chair.

Dr. C. M. Wilson presented the following specimens, the notes of which will appear in some future issue, owing to the author's failure to forward the papers to the Recorder:

Case of Invagination of the Ileum.

Case of Large Vesical Calculus.

Case of Multiple Vesical Calculi.

Dr. Guy Hinsdale presented three aneurisms, and a specimen of fracture at the base of the skull.

Case 1. Aneurism of the Arch of the Aorta.

Wm. G., a fireman, æt. 44, was admitted to the Episcopal Hospital September 16, 1881, suffering from pneumonia of the right side, associated with signs of pleurisy. It was noticed at the time of his admission that there was a slight diastolic murmur heard at the aortic carttlage, and that no radial or ulnar pulse could be felt upon the left side.

The pneumonia pursued its course until it ended in death on the eleventh day after admission. Eighteen hours before death occurred, however, after an attack of severe pain along the course of the sciatic nerve, he suddenly became unconscious, and his respiration puffing. His pupils were contracted, and his left arm rigid. His pulse became at once fuller and stronger than it had been since admission, there being ninety-six beats per minute. Fifteen hours before death the right side of the face was paralyzed. The radial pulse was smaller on the right side than on the left. The right foot was cold, and the posterior tibial pulse behind the internal malleolus was just perceptible. Respirations were forty per minute, and stertorous; sweat and urine profuse. Twelve hours before death respirations fifty-seven; temperature, 106.2°.

The patient remained essentially in this condition until his death. At the *post-mortem* examination, upon opening the thoracic cavity, the base of the right lung was found in the second stage of pneumonia. There was hypostatic congestion of

the left lung. But what at once threw light upon the later features of the case was the presence of an aneurism of the transverse portion of the arch of the aorta. The specimen shows a symmetrical dilatation of the vessel capable of receiving a large hen's egg. On examining the brain, clots, probably of embolic origin, were found in the right cerebral hemisphere, thus accounting for the paralysis which had been observed.

Case 2. Aneurism of the Common and External Iliac Arteries.

Johann B., a farmer, æt. 26, was admitted to the Episcopal Hospital October 27, 1882. His previous health was good; he denied specific history, and his habits were good. He was able to work until one week previous to admission, when he began to have a pain in the feet and legs, shooting up the body to the head. His skin was yellowish, his tongue coated, his urine did not contain albumen. There was œdema of the feet, and it is worthy of note that this had occurred on the right side four months before admission. His spleen was apparently enlarged; his lungs presented nothing abnormal. Systolic and diastolic murmurs could be distinctly heard all over the cardiac area, but most clearly at the right second cartilage, and transmitted over the left subclavian and carotid vessels. The heart was considerably hypertrophied.

Six weeks later, the attacks of pain in the right thigh and side, to which he had been subject ever since admission, became more frequent and severe. The murmurs at the aortic valve were systolic and diastolic, low, soft and confused. A distinct thrill was now felt; heart's impulse quick and trembling.

About one week before death a swelling occurred in the right parotid region, extending to the cheek and lower jaw. Subsequently a discharge, thin and purulent, took place from the ear, and the patient became unable to protrude his tongue. The œdema of the right leg returned and increased daily, extending up to the body, the whole leg being about three times the bulk of the other. The aneurism grew with great rapidity; the distention of the vessel and the overlying structures gave rise to the greatest pain. The patient was unable to lie down, and was always found in the sitting posture. The mind was clear up to the day of his death, which occurred two months after admission.

At the autopsy, upon opening the abdomen the aneurism was found very prominent, occupying the right side of the abdominal cavity and extending from the concavity of the liver to Poupart's ligament, a distance of about nine inches. The aorta bifurcated at the upper border of the fourth lumbar vertebra, the tumor arising from the common iliac artery one inch from the aorta. Its whole anterior surface was covered by peritoneum. The right kidney was elevated, lying upon the tumor's upper surface, the ureter passing over the convexity of the tumor and to the inner side. The psoas muscle and crural nerves were displaced and stretched to the outer side of the aneurism. The femoral artery emerged from the tumor one inch above the origin of the profunda.

Upon opening the sac a second sac was found within. No rupture had taken place. The cavities of both sacs were found filled with clots in various stages of organization. The walls were leathery and large flaps of organizing clots were found attached to them. There were also *post-mortem* coagulations.

The line of the blood current could be determined by the passage of a catheter. This was found both from above and below to skirt the inner side of the tumor, and to pass through a comparatively short channel in its interior. Three of the bodies of the lumbar vertebræ were slightly eroded. The heart is hypertrophied; its weight fifteen ounces. The mitral valve is normal but the aortic valve shows exuberant vegetations which impede its action and which are very friable.

The specimen presented embraces the heart, the aorta, the aneurism with the right kidney upon its upper surface, the right femoral and the left iliac arteries.

Case 3. Aneurisms of the Abdominal Aorta and Left Common and External Iliacs.

Mary K., aet. 30, was admitted to the Episcopal Hospital Aug. 26, 1882. Her mother died in confinement, and her father, of heart disease. She had had three children; her husband was a bartender and had been treated for syphilis at a dispensary; but the patient herself denied specific history, nor were any evidences of it found. She had never been ill before.

Seven months previously she had pains in her left groin; these pains extended to the abdomen, and about five months previous to admission she noticed a small tumor in the hypogastrium, which pulsated and became painful on pressure. Three months later her strength began to fail; she became delicate and lost flesh. For one month the tumor had been prominent. Pain then came on spontaneously at intervals, and she had backache. She became weak and took to her bed. Two weeks before admission the left leg and thigh became painful and felt benumbed, and motion grew difficult and for a time was lost. Meanwhile the tumor increased.

Upon admission she was weak. Her face showed anxiety and suffering, and had a haggard and pinched look. The organs of digestion were not interfered with. Her lungs and heart were normal. On the right side of the abdomen a tumor was felt, one inch above the umbilicus, and extending from one inch to two and one-half inches from the median line, downwards two inches. It was painful on pressure, pulsated distinctly, and over it a distinct systolic bruit could be heard. A distinct notch separated this from a large, hard mass in the left iliac fossa, indistinctly pulsating, immovable, and not particularly painful on pressure. There was a faint *bruit*.

In the left thigh there was insensibility to touch over the distribution of the anterior crural nerve, while pain in the left knee was often so great as to deprive her of sleep. The urine did not contain albumen.

At the end of two weeks sensation was diminished on the left side as high as the edge of the ribs, and in the whole of the lower extremity, excepting the first and second toes. It was impaired over the buttock. Œdema of both legs occurred. The posterior tibial on the left side could scarcely be felt to pulsate.

September 13th the patient suddenly died. At

the autopsy the abdomen was first opened. There was no blood in that cavity. Upon the left side in the iliac fossa there was a prominent tumor of the size of a cocoanut; over it lay the psoas muscle, which was spread out in the shape of a thin aponeurosis. The iliacus muscle was displaced. The psoas parvus was inserted in the tissue covering the tumor.

A fusiform dilatation of the aorta was then noted. The diameter of the aneurism was three times the normal diameter of the aorta. Commencing from a point seven inches above the bifurcation, it extended downward nearly five inches.

A second aneurism occupied the left iliac fossa, involving the left common and external iliac arteries. It was about six inches in length and was filled with old fibrous, laminated clots. The latter aneurism had opened posteriorly behind the peritoneum and against the iliac bone. There had evidently been ruptures previous to the one which finally caused the patient's death. There were found old as well as recent clots outside the aneurismal walls. There was no erosion of the bones. The femoral artery was normal, and no atheroma or evidences of syphilis observed, although the woman had been exposed to infection from a syphilitic husband.

EDITORIAL DEPARTMENT.

PERISCOPE.

The Delhi or Oriental Sore.

Before the Epidemiological Society of London (*Med. Times and Gaz.*, April 14, 1883), Surgeon-General Murray read a paper on this subject. He stated that this disease had attracted little attention in India previous to the Mutiny in 1857–58, at which time the palace and city of Delhi were occupied by European and native troops. The military cantonment had previously been situated two miles outside of the city walls, and this disease was scarcely known amongst troops; but cases were occasionally heard of there, and at Mooltan and Lahore. After 1858 it was brought prominently to notice, as the troops in garrison at Delhi were attacked with great severity—from 40 to 70 per cent. were admitted into hospital suffering from the sore, whilst nearly half the regiments had slight sores which were treated out of hospital. The disease was very tedious and troublesome, though only in two or three instances fatal. When severe, or situated on a joint, it rendered the men unfit for duty; and when on the face it was very disgusting and disfiguring. This was illustrated by eighteen photographs of the disease situated in various parts of the body. In 1865 the Government of India appointed a commission to investigate the disease, to trace out its origin, and to point out a remedy. Dr. Murray was President of this commission, and he thus had an opportunity of accurate observation of the disease. It appears on exposed parts of the body—at first as a small pimple, like an irritated mosquito bite, and remains in this state for several days or weeks, sometimes even for months. It then slowly increases, and a thin fluid escapes from the top, which dries and forms a circular scab, gradually increasing in size and thickness. When this scab is removed, an indolent ulcer is exposed, with undermined edges, and lobulated granulations in the centre—in healthy subjects like raspberries, but paler and more blue in cachectic cases. These ulcers, when very broad, show signs of cicatrizing from the centre; in all there remains a depressed cicatrix after healing. This is the natural course of the disease, which may last from six months to two or more years, when uncomplicated with leprosy, secondary syphilis, miasmatic fever, or a cachectic state of the body produced by other diseases or famine. When such diseases exist they are aggravated and rendered more fatal by combination with the one under consideration. The Delhi sore appears identical with the "yaws" of the West Indies, "parangi" of Ceylon, and the "bouton" of the eastern and southern shores of the Mediterranean. At Delhi, Mooltan, and Lahore the disease is endemic, and confined to residents within the city walls. The commission at Delhi, after patient investigation, formed the opinion that the Delhi sore is a cutaneous disease, of parasitic origin, and that the foul water of the city wells was the habitat of this parasite. The water of all these wells was excessively impure. In some, according to analysis at this time, the water contained from 45.375 to 123.200 grains of organic matter per gallon. The wells were then cleaned out, and from one a cartload of bones was extracted. It is probable they had not been cleared out for centuries. The water from them was only used for washing or bathing purposes. The wells in all the ancient cities of India are very impure, and if a germ or parasite in foul water is the cause of the disease, this would account for its presence in Mooltan, Lahore, etc., whilst the impure water in some of the tanks in Ceylon would furnish its habitat in that country. This germ or parasite finds entrance to the body, through bathing or washing, through an opening in the cuticle caused by any abrasion of the skin, and the most frequent channel is probably the surface of an irritated mosquito-bite, as the ordinary situation of the sores is on an exposed part of the person, as the face, hands, and arms, while the hairy scalp escapes. It was remarked that nearly all the dogs in Delhi suffered from this disease in the nose, whilst the body, which is covered with hair, and thus protected from mosquitoes, escapes. The germ, once introduced, develops in the cutis vera, exciting inflammation in the surrounding

part, and the sore results. Attempts were made to detect the germ microscopically, but in vain. Since then, Dr. Fleming and others have supposed they have discovered it, but as Drs. Lewis and Cunningham, after careful examination, failed to see it, implicit confidence cannot be placed in less experienced observers. Medical men differ in opinion regarding the contagious nature of the disease. To determine this point, six natives were inoculated from a dry crust, but no disease followed. They were then inoculated from a fresh sore, and twenty-three out of twenty-four punctures showed irritation like that from vaccination on the third day, which gradually extended till the sixth and tenth day, when remedies were applied to check the disease in four men, leaving it to take its course in the other two cases. Photographs of these cases show their similarity to the ordinary Delhi sore. The treatment recommended by the commission was to avoid using impure water, or, if that were impossible, to boil the water before using it, and to have all wells cleared out every year. The local treatment of the sore is directed to destroy the vitality of the germ by the application of the actual cautery in the earliest stage, and potential cautery—potassa fusa or nitric acid—and carbolic acid or mercury in more advanced stages, following the destruction of the specific disease by simple dressing, and washing with diluted carbolic acid.

The Dangers of the Parasitic Theory.

The *Medical Times and Gazette*, March 31, 1883, says:

Amidst the almost universal incense of admiration that awaits in France every fresh announcement of the results of M. Pasteur's researches, it is as well to note that some observers are not so easily satisfied. In the *Progrès Médical* for March 10 we find the following criticism, from the pen of M. Jousset de Bellesme:

"We were not among the last to raise our voice against the application of the theory of microbes to medicine, and to signalize the serious inconveniences which might be induced by the introduction of these doctrines into pathology. When we showed in this journal* that these theories, almost entirely hypothetical, engaged medicine in an unfortunate direction by attributing to morbid phenomena a simplicity that they are far from possessing in reality, and by leading to treatment both irrational and dangerous for the patient, we were taxed with exaggeration and foregone conclusions. And yet we were but the echo of a large number of clinicians, and so true is this the case that at the present time a reaction against these tendencies has set in in the school of French pathologists. Practitioners who pursue therapeutics in an impartial manner, and so to say experimentally, had evidently received M. Pasteur's theories in the hope of deriving from them an excellent means of treating disease. In no other way can be explained the success of the parasitic doctrine, and the somewhat premature prepossession of which it became the object, chiefly on the part of the young medical generation. It is such a great point, in order to combat a disease, that we should be aware of its cause, and M. Pasteur was so affirmative, that a good number of practitioners came to the conclusion that from the moment that infectious diseases were known to be caused by invasion of microbes, it sufficed to kill the microbe in order to cure the disease. All those who have reasoned in this fashion have only, together with M. Pasteur, forgotten one thing, which yet deserves well that it should be taken into consideration—the patient. Yes, unfortunately, there is a patient in this question of microbes applied to pathology. It is not so simple a matter as in the laboratory, where the microbe is regenerated and strengthened in its chicken-broth. We have only to pour on it the blackest of poisons or the most energetic of antiseptics, and all disappears—all except the germs of these singular bodies, if we are to believe M. Pasteur. But when we have a patient in our hands we scarcely can treat him, however stuffed with microbes he may be supposed to be, as we would the chicken-broth, and deluge him with floods of carbolic or salicylic acid. Still, there have been found practitioners who have dared to do this; and Prof. Jaccoud, whose high authority none will contest, has taught us the results of these audacious attempts in the treatment of typhoid fever. It has come to pass just as might have been anticipated; the employment of antiseptics in large doses has introduced into the statistics of the mortality of typhoid fever an element which formerly only figured there very exceptionally—sudden death. It is but too certain that from the moment the idea is started that typhoid fever depends upon a microbe developed in the economy, a resort to antiseptics necessarily takes place. Those are employed which are best tolerated by the economy—salicylic acid, sulphate of quinine, and even carbolic acid. As the administration of these in small doses leads to no result, logic requires that the doses shall be increased and pushed on until this mischievous microbe is annihilated. Unfortunately, while on this road, as already stated, the patient is forgotten; but he, in his turn, does not forget, when the dose is sufficient, to die suddenly. Sudden death, then, is one of the results which may spring up in the art of healing from the discoveries of M. Pasteur; and on reflection, we cannot but regard it as highly extraordinary that doctrines which may lead to such results have been able to attain so great a vogue in medical practice. For, even supposing that the theories of M. Pasteur are exact, and that typhoid fever is really the fruits of an invasion of microbes, there is evidently no advantage to therapeutics to be derived from the knowledge of this fact; for this very simple reason—that the organism would not tolerate sufficiently strong doses of antiseptics to kill in the blood or amidst the tissues the lower parasitic organisms, the resistance of which to these agents is greater than that of the more highly differentiated cells of our economy. And as to believing that an antiseptic will be found which destroys bacteria without attacking the histological elements in man, it is to fall into a great illusion, and to misunderstand the laws of general physiology. The more an organism is differentiated, the less does it resist external agents capable of injuring it; consequently, we may affirm that, of all organic cells, it is well nigh those of bacteria which are most resistant to

* *Medical Times and Gazette*, April 29, 1883, page 451.

the action of poisons and antiseptic substances. However this may be, certain it is that typhoid patients to whom antiseptics are administered in large doses die suddenly, and quinine itself makes no exception to this rule. And thus Prof. Jaccoud, in his lecture on the treatment of typhoid, protests forcibly against these therapeutical temerities."

On the Use of Anæsthetics During Labor.

In a paper recently read before the East Surrey District of the South-eastern Branch of the British Medical Association (*Brit. Med. Jour.*, May 5, 1883), Dr. Savill indicates what he believes to be the main precautions, the observation of which would render the use of chloroform perfectly justifiable.

1. There are certain women who have a tendency to flood at every confinement, and others in whom there seems to be an already too great relaxation of fibre—weak anæmic females in their eighth to tenth confinement; and to these it would be unadvisable to give chloroform, except for necessity. Happily, it is not these women who suffer the most pain, but rather those strong, healthy primiparæ whose pelves and general build approximate to the masculine type.

2. We should not give it when labor is complicated with severe vomiting, or with acute heart or lung disease, unless there be imperative call for it.

3. It should not be given to the full extent, except for operation, convulsions, or spasm of the cervix; and then it is most necessary that one person should devote his entire attention to it.

4. The inhalation should be stopped directly we find the pulse becoming very weak, or the respiration irregular.

5. Anything which makes us suspect a fatty or enfeebled cardiac wall should make us cautious in the use of chloroform. Here, as in cases other than those of labor, it is not the most extensive valvular disease (so long as it be attended by compensating hypertrophy), but the atrophied or degenerate wall, that constitutes the source of danger. Unfortunately, the signs of these conditions are subtle and uncertain. Fatty heart may be suspected by an exceedingly feeble cardiac impulse, combined with an almost inaudible first sound; or attacks of dyspnœa, vertigo, and syncope, in the absence of anæmia, or valvular lesion; or the copious deposit of fat in other parts of the body, and the occurrence of dropsy without adequate cause. A dilated heart may be suspected by increased area of præcordial dulness, combined with epigastric and venous pulsation, and a want of correspondence between the violence of the cardiac impulse and the strength of the pulse. Pericardial adhesions also form a great source of danger. They may be suspected when the heart's apex is fixed above its normal position, and does not shift with respiration; or when there is depression instead of protrusion of intercostal spaces over the position of the apex, giving a wavy character to the cardiac impulse.

6. In all cases, we should take extra care to prevent the occurrence of hemorrhage after birth: by giving a full dose of ergot when the head reaches the perineum: by ceasing the chloroform immediately it is born; and by rousing the patient from her lethargy as soon as possible.

Diet in the Treatment of the Gouty Dyscrasia.

At a meeting of the New York Academy of Medicine, held February 15, Dr. William H. Draper read a paper with the above title.

Dr. Draper's observations went to show that gouty subjects were unable to digest the carbohydrates. This kind of food produced acid and flatulent dyspepsia, and the very symptoms which usually preceded an explosion of acute gout. In the children of gouty parents over-indulgence in amylaceous and saccharine foods was almost sure to be followed by evil consequences, and great caution in the use of these was one of the surest means of diminishing the liability to acute attacks in those already subject to the disease. The diet, then, in the gouty dyscrasia was to be in the main similar to that required in glycosuria, although it was not necessary that the abstinence from carbo-hydrates should be so strict as that demanded in diabetes. The patient should, therefore, refrain as much as possible from saccharine, starchy, and fatty foods, and especially from all fermented alcoholic beverages. Distilled liquors did not have the same effect, as seemed to be shown by the fact that gout was much more prevalent in England, where beer and stout were universally partaken of, than in Scotland, where whiskey was the drink most indulged in. It was also said that gout was rare in Russia and in Poland, where spirits are principally used. In regard to the effect of wines there was, of course, a difference according to the kind used. Sherry, port, and madeira were the most injurious, but the heavier clarets and burgundies were also to be carefully avoided. The effect of cider was well recognized in the production of gout, and in New England, where it was a common beverage, it often led to the development of the irregular forms of the disease.

All drinks containing any unfermented sugar were to be excluded, and if the patient insisted on taking wine, he would have to confine himself to the dryest of the dry champagnes, hock, or light claret. But even these could not always be trusted, and the safest alcoholic beverage that could be taken was a very diluted spirit. Indulgence in saccharine food ranked next to that in wine and beer in danger, and it was an important point to observe that this excluded the use of many fruits, such as strawberries, apples, and oranges. Next in importance in this connection came amylaceous articles of diet; but it was not necessary that these should be entirely abstained from, but only that they should be eaten in moderation. They did most mischief in those inclined to obesity and who led sedentary lives. All kinds of salads, tomatoes, and the various succulent vegetables free of starch, could be taken with impunity. In obstinate cases the milk diet was of the greatest utility. The digestion of the carbohydrates was always more or less impaired in gouty individuals; but if an active outdoor life were engaged in, it was not necessary to look after the diet so carefully. The gouty man who remained in-doors much of his time, however, would do well not to live upon potatoes and puddings.

Iodoform Suppositories for Puerperal Septicæmia.

Before the Medico-Chirurgical Society of Montreal (*Med. News*, March 3, 1883):

Dr. Alloway presented the records of six cases of puerperal septicæmia, three of which had been treated by a new method, viz., the introduction into the uterine cavity of iodoform suppositories. He referred to the care and anxiety which these cases caused to the attendant, the frequent visits necessary if the ordinary method of repeated intra-uterine injections is followed, as in general practice the assistance obtained is rarely skilled enough for this. The advantages of iodoform in general surgery were now fully recognized, and it occurred to him that they might be extended to the treatment of the raw placental surface and to the lacerations and bruises of the passages. The site of a separated placenta had been well compared to the stump of a limb after amputation. (With this remedy we had the advantages not only of a topical action, but, applied in the manner directed, the effect was continuous, and the vapor, or whatever it was, given off, permeated to all parts. Too often, with injections, the superficial parts were cleansed, and in an hour or so, unless repeated, the discharges were again fetid. He believed that with the iodoform we could get a more effectual disinfection of the intra-uterine cavity in these cases than with the ordinary solutions, and the trouble of constant injections was completely obviated.) The author referred to the current views on septicæmia, particularly to the formation of a virus by the bacteria in the decomposing discharges, and suggested that if, as Binz has shown, the iodoform controls the activity of the protoplasm of the colorless blood-corpuscles, it may do the same with the bacteria. In carrying out the treatment he used a Sims' speculum, washed out the uterus first with plain or carbolized water, and then, with a tent-inserter, passed the suppository far up into the fundus. He used them of the strength of ten, fifteen, or twenty grains, and usually introduced one night and morning. No poisonouseffects had been noted.

The Pathology and Treatment of Tuberculosis.

At the Second German Congress of Internal Medicine, Prof. Rühle, of Bonn, spoke as follows, *Med. Record*, May 19, 1883:

He reviewed and endeavored to answer the arguments against the view that the bacillus is the specific cause of phthisis. Accepting it as a cause, he urged the use of disinfection, isolation, and antiseptics in the treatment and prevention of the disease. His conclusions were: 1, human tuberculosis is an infectious disease; 2, the bacillus discovered by Koch is its special cause; 3, the fact that pulmonary tuberculosis may be transmitted from man to man by contagion is established; the exact method is not certainly known; 4, tuberculosis in man and animals is identical; 5, the therapeutics relate chiefly to prevention, but the best methods of prophylaxis cannot yet be formulated.

Dr. Fraentzel, of Berlin, related the results of the experiments made in connection with Koch and Gaffky with the

ANTISEPTIC METHOD OF TREATING PHTHISIS.

They had employed inhalations of menthol camphor, naphtalin, anilin, etc., but with negative results.

Professor Klebs, of Zurich, believed it demonstrated that bovine tuberculosis was communicable to man. He thought that a certain predisposition must exist in order that contagion occur, and reaffirmed his old view that the intestinal tract was often the place where the infective virus entered.

Professor Hiller, of Berlin, had made injections into the lung tissue (in cases of phthisis) of corrosive sublimate, bromide of ethyl, and alcohol, but without any result.

Dr. Schott, of Mannheim, recommended salicylate of sodium and sulphurous acid as antiseptics in tuberculosis.

Dr. Zeigler, of Tübingen, described his views of the way in which the tubercular virus enters the system. He thought that the entrance occurred through three channels, viz., the blood-vessels, the lymphatics, and the lungs. In accordance with this we may distinguish

THREE TYPES OF TUBERCULOSIS.

When it enters by the blood-vessels we usually have general miliary tuberculosis, but in rare cases, especially in children, tubercular foci are formed in the lungs, making the disease resemble a localized tuberculosis.

The second form, in which the lymphatics take part, is that which is generally produced by inhalation. A tubercular lymphangitis is excited. The tubercular foci thus formed enlarge, then soften, and their products may be carried further (1) by the lymph paths; or (2) by the blood-vessels, causing an embolic tuberculosis; or finally (3), directly along the bronchi. In this way, or by direct infection, we find developed the third type, or bronchial tuberculosis.

Professor Rühle, in concluding the discussion, called attention to the fact that not a voice had been raised against the view that tuberculosis was an infectious and parasitic disease.

Hypodermic Injections of Ether in cases of Imminent Death from Hemorrhage.

The Paris correspondent of the *Med. Press*, (Feb. 14, 1883), writes as follows:

M. Georges Hayen, of the St. Antoine Hospital, read a paper on the "Value of Hypodermic Injections of Ether in Cases of Imminent Death from Hæmorrhage." In his report he said that transfusion of blood, although frequently practiced abroad, had but few partisans in France; yet if medical men would only give it a fair trial, he was sure their verdict would be in favor of it. He could not help thinking that the criticism made upon the operation was much exaggerated. His colleague, M. Verneuil, gave it as his opinion that transfusion of blood was a difficult, dangerous, useless operation; that the blood, acting only as a stimulant, could be easily replaced by subcutaneous injections of ether. Emanating from such a high authority, this assertion gave him food for reflection. Could it be true that transfusion could be replaced by an operation as easy and relatively as inoffensive as the injection into the cellular tissue of a few drops of ether? Immediately he determined to put the merits of the proposition of M. Verneuil to the test, and for that purpose he experimented on a lot of ordinary

street dogs, and the result was completely in favor of transfusion. He bled until convulsions commenced, indicating the approach of death, and although he injected ether four times, the dog died. In an exactly similar case he performed transfusion, and the dog recovered. Other experiments continued to prove the uselessness of ether, and, on the contrary, the exceeding great value of transfusion, which in nearly every case operated complete resurrection. As to the danger of the operation, it was greatly exaggerated, but he insisted on the absolute necessity of employing non-defibrinated blood. On the contrary, he considered that blood injected without its fibrine was not safe, and did not give good results.

The Trance Condition in Surgery.

The *Med. Gaz.*, May 19, 1883, says the activity of interest manifested in the curious psychological phenomena of mesmerism has awakened widespread inquiry regarding the nature of the trance state, and has established some few truths, along with dissipating many errors.

Not the least important of the questions that have been suggested by a study of these psychical phenomena, and by far the most interesting to the surgeon, from a practical point of view, is the possibility of performing surgical operations on patients in this state, with the same immunity from pain as is obtained by the use of ordinary anæsthetics.

An experiment was recently made by some New York physicians to aid in elucidating this problem, the result of which tended to establish the fact that on patients who are suitable subjects for the induction of the hypnotic state, it was practicable to perform minor surgical operations without awakening consciousness.

The operation done, was the removal of hypertrophied membrane from the nasal septum by the wire snare.

The rapidity with which the mesmeric state may be induced, as well as dissipated, and its freedom from disagreeable after-effects, as compared with ether, would render it a valuable substitute for that anæsthetic in minor surgery, if further experiments tended to confirm those already made.

The chief objection would seem to be that its application would necessarily be limited to those few who could readily be mesmerized, and that surgeons would either have to acquire, if they did not possess, the mesmerist's art, or add a mesmerist to their staff of assistants.

Reviews and Book Notices.

NOTES ON CURRENT LITERATURE.

——With the May number, *The Century* begins a new volume, and announces some changes in its arrangements. Its contents are of usual interest, being the continuation of Frank H. Cushing's "Adventures in Zuni;" "The Christian League of Connecticut," by Washington Gladden; "The Aboriginies and the Colonists," by Edward Eggleston; W. D. Howells' serial, "A Woman's Reason;" and "The Father of American Libraries," by Bunford Samuel. Frank R. Stockton has a bright little story, "Pomona's Daughter." The poetry is good, and the illustrations of the peculiar style lately adopted by *The Century*, are unusually spirited.

——*St. Nicholas*, of The Century Co., N. Y., and conducted by Mary M. Dodge, is the brightest and most charming of young people's magazines. The May number is a most interesting one, exquisitely illustrated, and is of itself worth half the yearly subscription of $3.00.

BOOK NOTICES.

The Practitioner's Ready Reference Book. By Richard J. Dunglison, A. M., M. D. Third Edition. Philadelphia: P. Blakiston, Son & Co. Cloth, 8vo., pp. 529. Price $3.50.

A great many points that the physician wants to look up are here collected into a moderate compass, and set forth with perspicuity and accuracy. Already the work has passed through two editions, and in preparing the third the author has added a mass of useful material, and carefully revised what was contained in the former issues. We do not doubt but what it will continue to enjoy its popularity, as it well deserves.

Insanity: Its Causes and Prevention. By Henry Putnam Stearns, M. D., etc. New York: G. P. Putnam's Sons, 1883. 8vo., pp. 248.

The subject which is treated of in this volume is one of great weight—perhaps increasingly so. That mental disease is gaining in proportionate frequency year by year is the opinion of many, and among others of Dr. Stearns. It is his object to analyze the causes, remote and immediate, which produce it, and to suggest when and how they can be remedied. He discusses with this view the insane diathesis, the influence of education, industrial and moral, heredity, consanguineous marriages, alcohol, tobacco, sex, poverty, religion, sleeplessness, etc. Few men can write on these subjects without betraying the personal prejudices of their own bias, and our author is not one of that few. It is often evident that his views are founded less on observation of what is, than on opinion of what ought to be. Yet his book contains a great deal that will be instructive to the mass, and occasionally suggestive to special students. His style is agreeable, and the volume is neatly manufactured.

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HOW TO PREPARE THE PANCREAS FERMENT.

Many preparations are sold to-day to the medical profession as pancreatin, respectively as the pancreas-ferment. But usually the physician is disappointed in their effect: why? we intend showing in the following. Generally the manufacture of the remedy mentioned is a very simple procedure and the result, therefore, an unsatisfactory one. Accidentally while speaking of the chemical nature of unformed ferments, Dr. O. Löw (Ueber die chemische Natur der ungeformten Fermente. Pflüger's Arch., xxvii. p. 203) describes the manner of preparing a really pure pancreas-ferment, and we here translate the same for the benefit of those who wish to manufacture such an article. They will see also that the procedure is by no means so simple.

One kilo of a pancreas-gland, cut up finely, is left standing for a day or two at a temperature of 14°; one and a half of its weight of 40% alcohol is then poured over it and left standing for two days. The somewhat thick mass is then pressed through a hair-sieve, the fluid is isolated and directly precipitated with a mixture of two vol. absolute alcohol and 1 vol. ether; the precipitate is washed with absolute alcohol, pressed, the residue dissolved in water, and again precipitated with alcohol, ether, and the residue dried over sulphuric acid. This raw ferment is now dissolved in water, filtered, precipitated as thoroughly as possible with diluted acetate of lead, the filtered part freed again of lead, precipitated with absolute alcohol, etc.

The gain of pure ferment amounts to about 2 p. m. of the gland. The ferment procured in this manner is a snow-white powder, easily soluble in water, and forming then a fluid the reaction of which is very weakly acid; it digests fibrin energetically, and possesses powerful diastatic properties—is therefore a mixture of two ferments. The solution shows in general the reactions of an albuminoid substance, gives Millon's reaction, the biuret-reaction with potash and copper sulphate, but does not coagulate by heat, and becomes slightly turbid only with ferrocyanide of potash

and acetic acid or continues even clear, and the elementary analysis gives the following figures: $C_{32,75}, H_{7,51}, N_{16,55}, O + S_{23,19}$ p. m.; this coincides with that of albumen, and its behavior to reagents is very similar to that of the pepton.

A pancreas-ferment, if carefully prepared in the manner and by the method described above, would produce perhaps more satisfactory results in troubles of indigestion, than most common pepsin-preparations do now. But the pancreatin as at present generally sold by the drug trade is a remedy totally unreliable. We hope that some enterprising manufacturer will take the pains of preparing a really pure pancreatin, in which case we do not doubt that it would soon take the place of pepsin. Whenever prescribing the latter, we involuntarily do so from the idea that the change of albuminoids into albuminose wants assistance, while really the hydro-carbons and other aliments, digested by the pancreas-ferment, may be at fault.

ANÆSTHESIA BY CAUSTIC APPLICATIONS.

M. Jules Guerin, at a recent meeting of the Academie des Sciences (April 16th), related the first case where local insensibility, sufficient to perform an operation of gravity, was obtained by the use of caustics. It was a case of scirrhous tumor of the breast, presenting two small crateriform ulcerations, non-adherent at the base, and unaccompanied by any glandular enlargements in the axilla.

Her general health was not favorable; she had been troubled for a long period with catarrhal bronchitis, and presented symptoms of heart disease, so that it was not judged advisable to submit her to a prolonged sèance of anæsthesia.

About two centimeters from the circumference of the tumor was applied an elliptic layer of Vienna paste about two centimeters wide, completely surrounding the tumor.

After about a quarter of an hour, the patient said that all the pain she felt in the tumor was gone.

Five minutes later the caustic was removed, and a wide dark surface was found where it had been applied.

A platinum thread was passed under the tumor from below upwards, so as to draw the breast out from the chest wall during the operation. An incision was then made circularly all around the breast on the cauterized line, and the breast itself detached, partly with the handle of the scalpel, partly with the scissors, with very little hemorrhage—only one arteriole required a ligature—and without the patient making any complaint of suffering. The operation succeeded, there was no fever, the excavation gradually filled in; the cauterized band at its circumference, at first dry and preventing the passage of the liquids of the wound, gradually became detached and disappeared.

PRESENCE OF MERCURY IN ANIMAL SUBSTANCES.

The method which for many years had been adopted to demonstrate the presence of mercury in the urine was originated by Ludwig, and received his name. Recently Dr. O. Lehmann disputed the correctness of the test. Dr. H. Paschkis has now given this subject a careful investigation, and he considers, in his article in the Ztschrift. f. Physiol. Chemie, vi., p. 495, Ludwig's method as one not only to be easily executed, but also perfectly sure and safe; 0.2 milligr. chloride of mercury were demonstrated in 400 ctms. urine by this method. P. made one modification of L.'s procedure; he washes the zinc-dust with an alkaline water, and heats the dust purified in this manner. The result is satisfactory.

According to Paschkis, Fürbringer's procedure can be executed with still greater rapidity and ease, it being also simple; but the test is hardly so delicate, though 0.2 milligr. chloride of mercury can also be demonstrated in 400 ctm. urine. The simplest method, however, of all, is the employment of goldleaf to digest the urine to be tested for mercury; the whole is pressed into a paste, washed with alcohol and ether, and then heated in a glass tube with sufficiently thick walls. The recommendation of Lehmann, with muriatic acid

and chlorate of potassium to destroy the organic substances contained in the urine, P. considers to be totally superfluous and unnecessary.

PROSTITUTION IN FRANCE.

In a recent work by M. Armand Desprès, of the Paris Faculty, devoted principally to statistics, and written in opposition to the recognition and licensing of the social evil by the state, the following figures are given:

There are in France 15,057 registered prostitutes, 7,859 belonging in maisons de tolerance, which number 1,328; 7,198 prostitutes are what is termed en carte—they live in their own rooms and appear at certain stated times (once monthly) for examination. Besides this prostitution recognized by the law, there is another; the individuals exercising it escaping as best they can the attention of the police. The number of free prostitutes is thought to be about 41,000.

M. Desprès asserts that where prostitution is regulated by the state, and the danger from infection thus obviated, marriage is thought of later in life, and increase of population reduced to a minimum.

D. S. S.

"Within the last dozen years, nearly all of the Universities and Colleges of Physicians in the United Kingdom have instituted special diplomas in state medicine, or certificates in sanitary science."

So says Dr. Charles A. Cameron in his address on "Sanitary Legislation and Administration at Home and Abroad," read before the First Meeting of the Sub-section of Public Health of the Academy of Medicine in Ireland, February 9 (*Med. Press*, February 28, 1883), and so we hope we can soon say of our American Universities and Colleges.

When we can chronicle the fact that our colleges have instituted regular chairs of hygiene, and when we have found worthy men who have added to their other titles that of D. S. S. (Doctor of Sanitary Science) then can we confidently look for intelligent preservation of health and avoidance of disease.

IODOFORM DRESSINGS IN LESIONS OF THE PERITONEUM.

The use of iodoform in cases of ovariotomy and other operations in the abdominal cavity has given exceptionally good results, but exposes the patient to the serious risks attending absorption of the toxic agent.

To avoid this, M. Kuster recommends for peritoneal dressings a layer of sponge impregnated with iodoform, so that but a very small quantity of the drug remains on the surface of the sponge.

In this way there is enough iodoform to insure perfect antisepsis, and not sufficient to induce toxic accidents through its absorption.

A tampon containing iodoform should at the same time be introduced into the vagina.

NOTES AND COMMENTS.

An Interesting Case of Injury to the Heart.

A laborer of herculean strength and immense build, received a wound in the region of the heart ¾ ctm. inside of the mammary line, 2 ctm. from the nipple, and 4½ ctm. from the left margin of the sternum. The wound was 2 ctm. in length, and had been made by a knife, the blade of which had penetrated for a distance of 15 ctm. into the body of the patient. Immediately after the injury, the man walked on fifteen steps further, and not until a few hours after the trauma was he taken to the hospital, where the dulness over the heart, and the heart-sounds were found unaltered, but the pulse was very small for a man of his size. In the hospital it was supposed that the lung and perhaps the pericardium, but surely not more than the left coronary artery of the heart, had been injured. But the very next day, under symptoms of intense restlessness and dyspnœa, the pulse became still smaller; later in the day, a dulness developed itself, reaching from the heart to the spine, and under increasing restlessness and dyspnœa, the patient died thirteen hours after the injury had been received. The post-mortem examination revealed the following: The *left* pleural sac was widely open, the lung uninjured, the wound penetrated horizontally through the pericardium and the anterior wall of the *right* ventricle. The wound channel ended in the posterior wall, passing, therefore, fully through the ventricle. The pleural cavity contained an enormous quantity of blood, so did the pericar-

dium; in both, most of the blood was coagulated, but the right pleural cavity contained about 450 ctm. fluid blood. Death had taken place, therefore, in consequence of slow oozing out of blood into the pleura, and Dr. Husner, who reports the case in the Deutsche Med. Wochenschr., 1882, No. 5, thinks that if adhesions had formed around the orifice of the wound in the heart, the patient might have been saved.

Œdema of the Temporal Region an Important Diagnostic Sign.

An unmarried lady, æt. 31, suffered for a long time from a purulent discharge of the ear and polypus-formation in the meatus on the right side. Suddenly there developed itself, with intense pains, deep in the ear, and spreading over the whole right side of the head, a swelling over the mastoid process, and synchronously a *diffuse hard œdema* in the region of the right temporal bone of the zygomatic process with slight redness of the integument. Soon unconsciousness set in, the pupils reacted evenly but sluggishly; the pulse was full, intermitting here and there, 56 per minute. Notwithstanding the discharge of a considerable quantity of fœtid pus by incision of the abscess over the mastoid process (carious in nature), death set in under progressing stupor. The post-mortem examination evinced meningitis caused by the otitis, complicated by phlebitis and thrombosis of the lateral sinus. The case is reported by Dr. S. Moos in the Zeitsch. f. Ohrenhlkd, xi., p. 242. M. had some time previous a similar case, where the œdema of the temporal region also enabled him to make a correct diagnosis, and to base the fatal prognosis upon.

A Case of Obscure Fatal Nervous Disease.

A woman aged 55, who had never given her health a thought, for it had always been excellent; but who had had a great deal of trouble, finally broke down with symptoms of partial paralysis of motion in the tongue, palate, portions of the face, the muscles of the back of the neck, and left shoulder.

At the end of six months' rest, these symptoms disappeared almost entirely, but returned more more rapidly than they went; and two months later, about seventeen months after the first appearance of paralysis, death ensued during sleep.

Dr. F. C. Shattuck, who reports the case in the *Boston M. and S. Jour.*, May 17, 1883, asks:

1. Was the original diagnosis of functional and recoverable disorder, made by me and confirmed by Dr. Webber, correct.

2. If it was correct how are we to explain the fatal result without the advent of any new symptoms, but simply under an aggravated return of the old?

3. If it was not correct, what was the nature of the disease? Can it have been an anomalous case of glosso-labio-laryngeal, or bulbar, paralysis?

Subcutaneous Nodules and Cardiac Vegetations.

Whether the existence of subcutaneous nodules has any bearing on the prognosis of disease of the mitral valve is a question recently discussed by Dr. Drewitt before the West London Medico-Chirurgical Society (*Med Press*, May 9, 1883), Drs. Barlow and Sainer first called attention to these bodies in children before the International Medical Congress. Dr. Drewitt exhibited a boy aged nine years, who had had rheumatic fever and who had in the knees, elbows, knuckles, and occiput about thirty-six small, slightly movable, painless bodies lying in the fibrous tissues immediately beneath the skin. He thought from the fact that in a case which he had recently shown at another society, where a loud, harsh, mitral murmur almost disappeared when a crop of nodules subsided, that these apparently unimportant bodies have an important bearing on the prognosis of disease of the mitral valve.

Dr. Dyce Duckworth (*Med Press*, May 2, 1883), relates another case which yielded gradually to iodide of potassium.

Peptonuria.

What becomes of the peptones is yet an unsettled question, though there is some ground for holding that they are converted into glycogen by the hepatic secretion. If this be true, then their presence in the urine would seem to indicate faulty hepatic digestion. Dr. Charles Henry Ralfe reports three cases in the *Brit. Med. Jour.*, May 12, 1883, in which he found peptones in the urine, in two of which the prominent symptoms were those of dyspepsia, after the relief of which, the peptones disappeared.

In order to insure the development of the characteristic reaction, the following mode of procedure must be adopted. A drachm of Fehling's solution is to be introduced into a test-tube, and then a drachm of urine is to be floated carefully on the surface. Where the urine comes in contact with the alkaline copper solution, a thick zone of phosphates will form, above which, if peptones be present, a red halo will appear, not

violet, as stated by Dr. George Johnson, but a decided claret, or ruby red.

Nature and Varieties of Gout.

Ebstein in his exhaustive and original work on this subject (Die Natur und Behandlung der Gicht), concludes that the formation of crystals of urate of soda in the different organs is not the only characteristic lesion of gout. He considers that these crystals are deposited only in tissues that have primarily undergone a form of necrosis, induced by the action on the elements of the tissues of urate of soda, dissolved in the blood and liquids bathing the affected parts.

He describes two forms of gout: the first, most frequent, affecting the joints alone and unaccompanied by any renal lesions. The second or renal form is more rarely observed, but of much greater gravity; the articulations in this form are secondarily affected, and never to such a degree as in the first form.

A Symptom of Lesion of the Sympatheticus.

Dr. E. Clément (Rev. de Méd., 1882, No. 10,) had the opportunity of observing two cases, in which one characteristic symptom existed which proved lesion of the sympathetic nerve. In the first case a carcinomatous growth had caused softening of the dorsal spinal cord at the seventh dorsal vertebra; the sympatheticus was included in the new growth. When C. passed with a dull instrument over the skin, not only a redness appeared over the place touched but also a swelling similar to the one noted in urticaria. This could be induced all over the surface of the body.

In a second case the diagnosis was morbus maculæ Werthofii. Here the same symptom was noticed, with the difference that these phenomena appeared by themselves. C. believes that in both cases a lesion of the sympathetic nerve caused the symptom, which is the opinion of many observers.

The Difficulty of Detecting True Syphilis in a Woman.

Dr. C. H. F. Routh considers the difficulty extremely great. He holds (*Med. Press*, May 9, 1883,) that there is but one true syphilitic and venereal sore capable of contaminating the system, and that the other is a purely local affection, a pseudo-syphilis, chancroid, or dirt sore. This true sore is oftentimes exceedingly minute and benign in appearance and behavior. It may be situated on the cervix uteri, the vulva, or the mammæ, and unless a most careful examination is made, aided by a true history from the patient, its existence is very likely to be overlooked, with the result that we are left in great doubt and uncertainty as to the true nature of the constitutional manifestations which supervene.

Permanent Asthma.

Prof. Germain Sée (*L'Union Med.*, March 6, 1883), regards asthma as made up of three elements: nervous, catarrhal, and emphysematous. When the latter condition is unduly prominent, we have permanent asthma.

His method of treatment, for which he claims excellent results, consists in the exhibition of full doses (thirty to forty-five grains per diem) of iodide of potassium. Under its continued use for some length of time, the asthmatic exacerbations disappear. and the permanent dyspnœa is greatly lessened, if not entirely controlled. It is sometimes useful to add from three-fourths to one and one-half grain of opium to the daily dose of the potassium salt, to prevent iodism.

Diet vs. Diabetic Coma.

In the report of a very interesting case of diabetic coma in the *Brit. Med. Jour.*, May 12, 1883, Dr. J. W. Bond says: "It is somewhat surprising that, in the published cases of diabetic coma, little is said as to the diet. In this, as in two other cases of which we have exact information, diabetic coma has supervened on the adoption of a diet rich in albumen and poor in starch. We think it noteworthy that the addition of extra mutton to a generous albuminous diet, in the case just described, was accompanied by an increased daily passage of over forty ounces of urine. On the first day after this increase of diet, the amount of urine rose from ninety-six to one hundred and sixty-eight ounces."

Cold-taking.

The past winter has been one of unusual severity in the West; in Iowa during January, the mercury was below zero on twenty-five days, and on two occasions it went to 33° below, yet Dr. Z. Carey, of Bangor, Iowa, notes in the *Cincinnati Med. Recorder*, May 15, 1883, that the people were singularly free from "*colds*" and catarrhal affections. But as soon as the warm weather commenced, there was a regular epidemic of catarrhal diseases, such as sore throats, bronchitis, lung fever, etc. This observation tends to emphasize, what we all know, but do not sufficiently realize, that it is not exposure to *cold* alone, but *sudden changes*, that prove injurious.

Cancer of the Pancreas.

While he does not consider them sufficiently distinctive to warrant a diagnosis, yet Dr. Alois Biach, in *Wiener Med. Presse*, February 11, 1883, gives the following as the symptoms usually observed in cancer of the pancreas:

1. Pain; 2, various dyspeptic disturbances; 3, pancreatic salivation; 4, pancreatic diarrhœa; 5, fatty diarrhœa; 6, the so-called "lipuria;" 7, the presence of a tumor in the epigastrium, which occasionally pulsates; 8, bronze coloration of the skin in occasional cases.

Hypertrophy of Toe Nails.

Before the Midland Medical Society (*Brit. Med. Jour.*, May 12, 1883). Mr. Hugh Thomas exhibited two very long nails, removed from the great toes of a woman aged 65. They had been allowed to remain uncut for eleven years. The right one measured five inches and a quarter, and passed under the four other toes; the left was three inches and three-quarters in length, and lay over the other toes of the foot. The patient was unable to walk. After removal, the matrix on both sides was found to be healthy.

To Prevent Blennorrhœa Neonatorum.

"Immediately after separating the child from its mother it is bathed, and during the bathing the eyelids and their immediate surroundings are carefully cleaned by folds of linen dipped in lukewarm water; afterwards the eyelids are gently separated, and into each eye a drop of a two per cent. solution of nitrate of silver is inserted."

This is Credès' method, and a recent circular from the magistracy of Vienna urges physicians to make its advantages known.

Excision of the Primary Sore in Syphilis.

There seems to be much diversity of opinion upon the merits of this procedure, which is probably due to the difficulty which often obtains in deciding whether certain suspicious sores are specific or not. Prof. Tarnovsky (*Monat. f. Prakt. Dermatol.*), formulates as follows:

1. That the primary syphilitic sore is from the moment of its appearance an evidence of constitutional infection.

2. Usually the wound heals easily after excision, and there is no return of the induration in the place; but there is no change in the course of the constitutional state; and

3. That there is no shortening by this means of the time required in treating the primary sore.

Plaster of Paris Pessary.

Dr. B. F. Dawson uses it. In the *N. Y. Med, Jour.*, May 19, 1883, he describes it. Pledgets of absorbent cotton each with a string attached, are soaked in a mixture of plaster of Paris and water, about the consistence of gum, and partially squeezed out. It is then placed in position. In a few minutes it hardens. It is then burned to remove the cotton, and dipped into wax or paraffine to make it impervious to the secretion. He praises them highly.

The Cause of the Wavy or Interrupted Breath-sound of Incipient Phthisis.

Dr. D. C. McVail (*Brit. Med. Jour.*, May 12, 1883), believes it is due to the transmission of the heart-sound through the solidified lung, since this solidification makes the lung a better conductor. Therefore, when the heart-sound is heard over the apex of a solidified lung, it gives to the ordinary sound of respiration an interrupted character, from the addition to it of this unusual sound.

Odontalgia of Pregnant Women.

M. Lindner strongly recommends the following potion in the dental neuralgia so common in pregnant females, and not caused by dental caries. He has found croton chloral of most benefit, as its analgesic effect persists several days:

℞. Croton chloral, gr. xij.
Aq. menth. piperit, ℥ j.

M. For one dose. To be taken in wineglassful of wine.

Lumbar Colotomy.

Dr. George R. Fowler reports a successful case of lumbar colotomy in an infant of two months in the *Med. Record*, May 19, 1883. The operation was performed for congenital absence of anus, the fæces having been previously discharged through a recto-vaginal fistula.

Bromide of Gold in Epilepsy.

Bourneville and Magnan have used this drug, in doses of about 10 centigrammes in cases of epilepsy. The results have been negative. Better try the *bromide of diamonds*.

Loreta's Operation.

The third patient upon whom Prof. Loreta performed his operation of digital divulsion of the pylorus, died of collapse in thirty-six hours. The case was almost hopeless, however, before the operation was begun. The other cases we reported in a previous issue.

Treatment of Gouty Pains and Neuralgia by the External Application of Nitrate of Silver.

Dr. Fronmüller (*Memorabilien*, January 31, 1883) rubs the solid stick over tho moistened surface for about thirty seconds. When dry, the skin is covered with a compress of salicylated cotton, which is removed once or twice a day until the blister is healed. In order to be efficient, the irritation should be sufficient to cause an exudation beneath the epidermis.

The Dormant Period of Diphtheria.

A strong appeal for sanitation is made by Mr. John Spear, in his report on an epidemic of diphtheria (*Med. Press*, May 9, 1883), for he clearly shows how the poison of this dread disease has lain dormant in certain localities for months, and again has sprung into activity when favored by bad hygienic surroundings.

Syndectomy for Pannus.

In a paper on this subject by Dr. Flavel B. Tiffany (*St. Louis M. and S. Journal*, May, 1883), the author states that of the twenty-eight times he has made this operation, he has not had a single case where there were any untoward results, and in all but one single exception the results have been most brilliant.

Local Application in Erysipelas of the Face.

The following rather strong application may be painted over the parts affected once every two hours; a thin layer of cotton being placed over the parts immediately afterwards:

℞	Ac. carbolici,	
	Sp. vini Rect, āā	ʒj.
	Sp. Terebinth,	ʒj.
	Tr. Iodinii,	ʒj.
M.	Glycerine.	ʒv.

Glycerine.

M. Jaccoud and M. Ferrand are using glycerine in place of cod-liver oil in phthisis, and with such success (*Med. Press*, May 2, 1883) that the former orders it in every case where the oil is not tolerated, and under its use the patients increase in weight, the cough diminishes, and the dyspnœa is in many cases considerably ameliorated.

Depressed Fracture of Skull.

In the *Brit. Med. Jour.*, April 21, 1882, Dr. George Wherry reports the case of a strong man aged 25, with a depressed fracture of the skull, and paralysis, in whom trephining was performed. This was followed by a period of insanity, and subsequently by complete recovery.

The Subcutaneous Injection of Nitro-Glycerine.

A correspondent of the *Medical Times and Gazette* (April 21, 1883,) writes, that by mistake, he injected thirty minims of a one per cent. solution of nitro-glycerine in a case of remittent fever, without any appreciable effects whatsoever. A subsequent examination revealed the presence of nitro-glycerine in the solution.

Chorea.

Dr. C. E. Armand Semple reports in the *Med. Press*, April 18, 1883, two cases of chorea cured by the following formula:

℞.—Liquoris arsenicalis, ♏iij.;
Misturæ ferri perchloridi, ʒij. Ter die.

CORRESPONDENCE.

Critical Notes on Eclampsia.

EDS. MED. AND SURG. REPORTER:—

It was with mingled feelings of pleasure and regret, that I read the axioms of Dr. Burdett (REPORTER, 10th March, 1883).

His first axiom is most excellent, when fully carried out. But bleeding, to be effectual in eclampsia, must be done for effect—to relieve the brain of pressure, to unload the lungs, and to enable the heart to carry its burden. Thus, and thus only, does it become "an anchor of safety."

The three remaining axioms seem to merge into one—*immediate and unconditional forced delivery*, with the no less exceptional promise annexed, "That delivery will *end the convulsions* in half an hour."

I shudder when I read this recommendation, strengthened by adding, "Often, with *all the force of traction* the attendant could give."

In the case cited, Dr. Burdett says, "There were fourteen convulsions, six after bleeding to ʒxviii.; only one after loss of consciousness." If it required thirteen fits to take away consciousness, we may safely infer that they were very light ones; that if the bleeding had been done axiomatically, or had been repeated after the next fit, the eclampsia would have been relieved, and gestation permitted to go on.

Then again, only a few pages further on (31st of March, 1883), we have quite a different solution offered for this difficult problem, by Dr. Fuller: "Addie, primipara, had five convulsions, the severest I ever saw; pulse full and bounding, face flushed; had had excruciating pain in the head—with no sign of labor. I gave

"Fl. ext. veratrum viride, gtt. iv.

"The pain left the head for the uterus, the pulse became softer, the convulsions ceased, and she was delivered in six and a half hours; mother and child doing well."

We need not question the satement of Dr. Fuller. Similar results have been witnessed by others, where not even four drops of veratria had been used. But we may, and do, protest against the report of solitary, isolated facts and cases, in

a way to mislead and disappoint the young and inexperienced. Those of riper experience will not be misled by them.

E. Michener, M. D.

Sylvania, Pa.

A Monstrosity.

Eds. Med. and Surg. Reporter:—

On the 6th inst., a male child was born of Mrs. Jacob Baltz, of this vicinity, with the following monstrous peculiarities: There is no external opening to the rectum, and not even an indication in the appearance of the integuments where the anus should be. The contents of the bowels are discharged through the urethra several times through the day, and possess all the qualities of the feces of an infant of its age. Gas also escapes through the same avenue, with a whistling noise, having the sulphuretted odor, showing its source to be in the alimentary canal. The prepuce is defective, covering less than half of the glans. The raphe is drawn up abnormally, by which the testicles are strangely pendant. The veins distributed over the abdomen, together with the integuments, present a bluish tint. There are no other anatomical imperfections.

The child nurses, and has been ordinarily nourished, though not so well developed as it should be at twenty-three days. It is also fretful, and cries a great deal. When the feces pass there is much straining, and apparent tenesmus. There are two other children in the family, a boy and a girl. They are both healthy and well formed, with the exception of the right side of the head, which in both is manifestly larger than the left in all the features, especially the ears.

The parents are Germans, and are both large, healthy and well-formed persons.

T. F. Turner, M. D.,

Lancaster, Ohio, May 31, 1883.

News and Miscellany.

American Laryngological Association.

(*Continued from page* 619.)

Third Day.

Dr. J. Solis Cohen, of Philadelphia, read a paper entitled

A CASE OF THYROTOMY FOR MORBID GROWTH; WITH SUBSEQUENT DEVELOPMENT OF EPITHELIOMA IN THE CUTANEOUS CICATRIX, BUT WITHOUT INVOLVEMENT OF THE INTERIOR OF THE LARYNX.

He was followed by Dr. F. H. Hooper, of Boston, whose paper was entitled

EXPERIMENTAL RESEARCHES ON THE TENSION OF THE VOCAL BANDS.

Dr. Beverly Robinson, of New York, then read a paper on

AURAL COMPLICATIONS OF INFLAMMATORY CONDITIONS OF THE NOSE AND THROAT.

The author of the paper believed it was very important for laryngologists to be familiar with the aural complications incident to the disease of the naso-pharyngeal space, and first directed attention to aural complications accompanying *acute* nasal and throat disease of inflammatory character; and, second, to the aural complications accompanying *chronic* inflammatory conditions of the nose and throat. The aural complications, such as occurred in connection with scarlet fever, diphtheria, measles, typhoid fever, and other acute general diseases and febrile affections, were discussed at considerable length. The author believed the complications were due not, as a rule, to direct extension from the nose and throat through the Eustachian tube to the ear, but to the same cause which produced the general disease. He believed that disease of the middle ear was much more likely to occur as a complication in case of chronic inflammatory affection of the throat and nose than in those cases in which these diseases were not present. In conclusion he urged upon laryngologists the importance of guiding their patients, especially with reference to the hygiene of the ear.

Dr. B. Bryson Delavan then read a paper on

TWO POINTS IN THE ANATOMY OF THE LACUNÆ TONSILLARIUM.

Dr. George W. Major, of Montreal, read a paper on

THE VALUE OF POST-LARYNGEAL PAPILLOMATA AS A MEANS OF DIAGNOSIS IN TUBERCULAR DISEASE.

He held that although these growths were recognized as present in a number of cases of laryngeal phthisis, no special importance as a means of diagnosis or prognosis has been attached to them. It was a difficult matter to say accurately in what proportion of cases of tubercle these developments were to be found, as frequently before coming under observation—laryngoscopically—the cases had either advanced to ulcerative changes, or undergone some local treatment modifying the condition of the facts. He thought about twenty per cent. of the cases might be a safe estimate. In his experience *feathery* papillomata occurring in the region stated were as valuable a means of diagnosing at a very early stage, and before physical signs had been developed, as any before the notice of the profession. Why this should be, he did not pretend to say, any more than he would attempt to explain the proneness of other parts to first affection. The *velvety* growths he did not regard as of paramount value, but considered they should be carefully pronounced upon.

In his private practice, and in the Montreal General Hospital clinique, he had found the conditions referred to, to be a most valuable aid to diagnosis, when present, and had observed the rapidity with which tuberculosis extended in this class of cases.

Dr. E. C. Morgan, of Washington, D. C., reported a case of a large pedunculated myxo-sarcoma, originating from the left glosso-epiglottic fossa and a portion of the lateral pharyngeal wall, in which he was enabled to remove the tumor in rather a novel and primitive manner, viz., by getting its pedicle between the tips of the *index* and *middle fingers*, and using considerable *torsion* and *force*.

The patient, a strong, well-developed man, of forty-nine years, had long suffered from dyspnœa,

dysphagia, and aphonia, which symptoms ceased almost immediately after the extraction. The tumor measured two and one-half inches in lesser, and two and three-quarter inches in greater circumference, was ovoid, of firm consistence, and had a pedicle one quarter inch long.

The common opinion that purely pharyngeal tumors are rare, he thought was erroneous, because he had found sixty-one reported cases, extending over a period of seventy-one years. He included in this class only those tumors which originated within the pharynx or extended into the inferior pharynx. Of the sixty-one cases fourteen were sarcomata and ten fibromata. The interest in his case centered in the rarity of pedunculated sarcomata in this region, the size of the tumor, and the method of removal.

Dr. M. J. Asch, of New York, then reported a case of sudden death occurring after tracheotomy.

At the autopsy nothing was found to account for the sudden death.

Dr. Asch believed that in the majority of cases in which there is obstruction in the larynx, tracheotomy is an exceedingly difficult operation; and that when it is performed for obstruction, whether acute or chronic, however easy its performance might be, tracheotomy should not be viewed in any light except that of a serious surgical procedure.

The reading of papers closed with one by Dr. Andrew H. Smith, of New York, on

ADHESION OF THE VELUM TO THE WALLS OF THE PHARYNX.

The Association then elected as officers for the ensuing year:

President—Dr. Frank H. Bosworth, of New York.

First Vice President—Dr. S. W. Langmaid, of Boston.

Second Vice President—Dr. S. Johnston, of Baltimore.

Member of the Council—Dr. Beverley Robinson, of New York.

Librarian—Dr. T. R. French, of Brooklyn.

The two retiring Vice Presidents, Dr. C. Seiler, of Philadelphia, and Dr. E. F. Ingals, of Chicago, as a committee, conducted the President-elect to the platform, and Dr. Lefferts, in a few well-chosen words, retired from the office, the duties of which he has so satisfactorily discharged. The President made a few appropriate remarks, and then declared the Association adjourned, to meet in New York on the third Monday in May, 1884.

American Surgical Association.

The American Surgical Association convened in its fourth annual session in Cincinnati on Thursday, May 31. There were about sixty members present. The President, Dr. Samuel D. Gross, of Philadelphia, called the meeting to order, and then delivered the following opening address:

FELLOW-MEMBERS OF THE AMERICAN SURGICAL ASSOCIATION: Allow me, as your presiding officer, to congratulate you upon your safe arrival, and to extend to you a cordial welcome to the Queen City, the centre of medical education in the Buckeye State, the residence of eminent medical teachers and practitioners, and the repository of the ashes of great medical men, who, during their laborious lives, added lustre to the profession, and left behind them undying names. We have come here, not as pleasure-seekers, but as members of a great body of men bent upon earnest work in the interests of our great and noble calling. It is a source of rejoicing to me, as I am sure it is to you, that since our last meeting our ranks have not been invaded by the fell destroyer. On that occasion it was my melancholy duty to announce to you the demise of four of our fellows, all men of distinction and of great usefulness. The meeting upon which we are about to enter cannot fail, if we may judge from our programme, to be of unusual interest, and that our deliberations will be conducted with that celerity and harmony of feeling which has heretofore characterized it, I am safe in predicting. Allow me, in concluding this brief salutatory, to direct your attention to a proposed alteration of the constitution, to increase the number of fellows from 100 to 150. The change is an important one, and merits your serious consideration. I also respectfully suggest that the acting Council be increased from four to seven, so as to impart greater efficiency to its work. Finally, it appears to me wise to take action upon any proposed amendments to the constitution and by-laws on the last day of every session, instead of letting them lie over for one year, as now provided for.

A letter was read from Professor Willard Park, of New York, in which he regretted his inability to be present, and recommended that future sessions be held in Washington City, so that members might have access to the libraries and museums there located.

The first paper was read by C. B. Nancrede, M. D., of Philadelphia, on the subject, "Have we any therapeutic means, as proved by experiment, which directly affect the local processes of inflammation?"

He was followed by B. A. Watson, M. D., of Jersey City, whose address was on the subject of "Lister's system of antiseptic wound treatment, versus its modifications."

At the conclusion of the last named paper the meeting adjourned and reassembled at three o'clock in the afternoon, when Dr. John H. Packard, of Philadelphia, read an interesting paper on the somewhat elaborate subject, "Reamputation of the hip-joint. Secondary Hæmorrhage. Ligation of the Primitive Iliac Artery. Remarks on Ligations."

The paper was discussed at length by Drs. Henry T. Campbell, of Augusta, Ga.; David M. Cheever, of Boston, and P. S. Conner, of Cincinnati.

Dr. Basil Norris, of the United States Army, was to have read a paper on the "Dislocation of the Astragalus," but at the last moment telegraphed that he could not be present in time to fulfill the duty. The vacancy was most acceptably filled by Dr. T. G. Richardson, of New Orleans, who read an instructive paper devoted to a discussion of a peculiar aneurismal formation of the thigh. He likewise read reports of several cases of excision of the ribs and trephining of the same for pus cavities in the thorax. The report was discussed by Prof. Gross.

The meeting then adjourned to the dissecting-room of the Ohio Medical College, under the care of Dr. P. S. Conner, where Dr. Packard demon-

strated on the cadaver the feasibility of the operations described in his paper. He also illustrated by the same medium his new method of reaching the colon by an incision through the back, in cases of obstruction or other troubles in that organ.

The session was then adjourned to meet the next morning at ten o'clock. In the evening a banquet was tendered the visiting physicians at the Gibson House. At the head of the long table, which was beautifully adorned with beds of flowers and baskets of fruits, sat Dr. S. D. Gross, the head and front of American surgeons, and on either side were seated men whose operations in surgery have made them famous. The occasion was a delightfully informal one, and there was an absence of regular toasts which was an agreeable innovation upon the average banquet.

The Association reassembled on Friday morning with a much larger attendance than on the preceding day.

In the absence of Dr. J. W. Yandell, of Louisville, who had been announced to read a paper on the subject "Resection of the Ribs," Dr. Gross delivered a discursive and interesting address on the value of early and late experiments in surgery. He was followed by Dr. Basil Norris, U. S. A., with an elaborate paper on "Dislocation of the Astragalus." At the conclusion the paper was liberally discussed by Dr. Gross and others. He was followed by Dr. P. S. Conner, who treated the subject, "Excisions of the Tarsus," in his usual masterly and thorough manner. Dr. L. A. Sayre, of New York, being absent from the session, his paper was omitted, and Dr. Marks, of Milwaukee, discoursed upon the method of "Trephining the Sternum for Removing Foreign Bodies from the Anterior Mediastinum."

At the afternoon session, Dr. E. M. Moore, of Rochester, N. Y., read a paper founded upon "Some Questions with Reference to Intra-Capsular Fracture of the Femur." The most elaborate paper of the entire session, possibly, was read later by Dr. M. Serm, of Milwaukee, regarding "Fractures of the Neck of the Femur, with Special Reference to Bony Union after Intra-Capsular Fracture." He illustrated by specimens as he proceeded. The paper, which was read for the most part by subjects, was discussed at length, after which the body adjourned.

In the evening Drs. N. P. Dandridge, of Cincinnati; Chris. Senger, of Chicago, Ill.; W. E. Taylor, of California; W. F. Peck, of Davenport, Iowa; and McCann, of Pittsburg, were elected members of the Association.

(*To be Concluded.*)

Ship Surgeons.

A committee of the British Medical Association are petitioning the Board of Trade to reform, or rather to inaugurate, a system of Marine Medical service, in connection with which Dr. J. A. Irwin makes the following lamentable statement, of dreary interest to all contemplating its disastrous effects:

Not less than 140 medical officers, approved by the emigration officer at the port of clearance, were intrusted, on different voyages, with the sole "medical charge" of 108 steamships, which, during the six months ending June 30, 1882, carried emigrants from Great Britain to the United States and Canada. Of these gentlemen, 8 possessed no qualification which would entitle them to practice in the United Kingdom; while, of 132 remaining, 35 held but a single diploma—29 as surgeon alone, 3 as physician alone, and three as apothecary alone. Forty-six are reported as being twenty-five years of age or under, and 19 as being twenty-three years of age or under. Of the the latter, 11 possessed but a single qualification. Of these 132 medical officers, *but twenty-four possessing any qualifications as a physician and surgeon, had reached their thirtieth year.* Such facts need no comment. Certainly they go far to prove—there being nothing exceptional during the period named—that these officers "are appointed without due regard to age, qualification, or experience;" and that "comparatively few medical officers in every way suitable can be found in the mercantile marine medical service."

The Poison of the Coral Snake.

According to a detailed account given by Mr. F. W. True (*American Naturalist*, January, 1883) the coral snake of the Gulf States (*Elaps fulvius*) is poisonous, and the only reasons that injuries from it are rare, are (1) the scarcity of the snakes in the neighborhood of towns, (2) their sluggish disposition, and (3) the small size of the mouth. The snake, which occurs in southwestern Texas, Florida and Mexico, ranges from twelve to twenty-four or thirty inches in length. Mr. Shindler, an artist in the United States National Museum, was bitten by one that he was sketching, and in spite of cauterization was sick for two or three days, but recovered his health under prompt medical treatment.

Dr. Kearney, of San Antonio, Texas, mentions a case in which death followed the bite, but the victim was a child.

The deadly cobra of India, from whose bite more than 18,000 persons perish annually, and the asp of North Africa, belong to the same family (*Elapidæ*) with the coral snake.

An Objection to the Electric Light.

Dr. Morris recently read a paper before the Birmingham Philosophical Society, entitled, "Experiments and Observations on the Air of the Birmingham Town Hall." He gave particulars of the results of his investigations as to the temperature and composition of the air in the hall when the building was lighted by gas, and also when lighted by electricity. His conclusion was, that the lighting of the public buildings by the electric light did not possess such superiority in ordinary cases over lighting by gas as might have been expected. That, he thought, was due to the fact that gas assisted in the ventilation by producing upward currents, which dragged up the lower strata of polluted air, whilst the electric light in no respect assisted ventilation.

Artificial Coffee.

The *Chemist and Druggist*, February 15, 1883, says that Sornani, of Pavia, in the *Ann. di Chin. Appl. Farm. ed Med.*, announces that he has discov-

ered quite a new and serious adulteration of coffee which is being practiced by the manufacture of artificial berries. These berries are composed of the meal of beans and acorns, with chicory and quartz powder to bring the mixture to the requisite specific gravity. A dough is made of these ingredients, which is cut by a special machine into the shape of coffee berries, and after drying, has exactly their color. Sornani says he has found as much as fifty per cent. of these artificial berries mixed with the genuine. On roasting, they take just the same color as the genuine, but they are discovered by soaking in water, when the false berries soon fall to pieces.

A Root Doctor.

A St. Louis doctor asserts that an old fellow living on the State line, who claims to be a root doctor, has had three medicines in the dispensatory. He names them respectively Hibobalorum, Lobobahirum, and Hilobustem. One is a cathartic, another an emetic, and the last a "rank pizen," which will bust his patients open. He makes the first by peeling the bark downward, the second by peeling it upward, and the last by peeling it around.

The Capon Springs.

This thermal and mineral source has long enjoyed a reputation as one of the most active of the therapeutic waters of West Virginia. The locality is an exceptionally healthy one; and we are informed that the accommodations for visitors are quite satisfactory.

The Berlin Polyclinic.

This institution, situated 51 Louisen Strasse, Berlin, merits the attention of all physicians who pay a visit to that great capital. Regular lectures on all the specialties are delivered, each course beginning on the first of a month and lasting through the month.

Items.

—Seventeen medical men have been chosen members of the Italian Parliament at the last general election.

—Dr. T. Lawrie Gentles, of England, has performed a successful operation for strangulated hernia in a man aged 86.

—In the *Brit. Med. Jour.*, April 28, 1883, Mr. Walsham reports a case of excision of cancer of the rectum with recovery.

—Lycopodium can be put to an excellent use when sprinkled over oiled silk. It prevents the fabric from adhering together.

—The managers of the Garfield Memorial Hospital have purchased a piece of property situated in the suburbs of Washington at a cost of $37,000.

—On the reassembling of the French Chambers, the Government intend submitting a bill to raise Dr. Pasteur's yearly pension from 12,000 to 25,000 francs.

—The French law decrees that the legitimacy of a child born three hundred days after the death or departure of the husband need not necessarily be questioned.

—A doctor is a *piller* of society. His enemies say that he can kill with *powder* without shot, and that his *drops* are almost as dangerous as the hangman's.

—A hospital for the children of gentlemen of limited means—a class believed to be increasing both in number and necessity—has been established in England.

—Wave-lengths of the sounds emitted by a man's voice in ordinary conversation are from eight feet to twelve feet, and of women's, two feet to four feet per second.

—The Emperor of China has received the permission of the Government of India to send a certain number of youths to India, with a view to their studying European medicine and surgery at the Medical Colleges.

—Sir William Thomson follows Dr. Thomas Reed in ascribing to man six senses instead of five, namely, the sense of force, of heat, of sound, of light, of taste, and of smell.

—The number of students in the medical faculty of the University of Vienna during the session recently ended was 1,750, against 1,412 in the corresponding period of last year.

—Dr. Truzzi vaccinated a number of pregnant women during the last three months of gestation, with a view to determine the protection, if any, afforded to the child. The results were negative, as the children were all successfully vaccinated a few days after birth.

—In the new German Parmacopœia, 360 articles have been struck out, and 48 added, a decrease of 312, the whole number being about 600. In the new edition of the U. S. Pharmacopœia 229 articles were cut out and 256 added, a net increase of 27, the whole number being 1,000.

—After a recent violent storm on the English coast, a quantity of saline matter was observed on windows at a distance inland. The deposit is believed to have been made by ocean spray, which in this case must have been blown by the wind at least sixty miles.

—On the announcement in Russia that the course of medical instruction for women would be closed, a great meeting was held to protest against the measure, and a Moscow merchant offered to spend 200,000 roubles if the St. Petersburg authorities would undertake the management of the lectures.

MARRIAGES.

HAIR—MORTON.—On May 22, 1883, by Rev. W. C. Falconer, D. D., of Springfield, Ohio, Dr. B. W. Hair and Mrs. M. M. Morton. All of Cincinnati, Ohio.

DEATHS.

FISHER.—On May 30, Dr. Joseph M. Fisher, in the fifty-fourth year of his age.

BRUNS.—In New Orleans, suddenly, May 20, 1883, Dr. J. Dickson Bruns, aged fifty years.